Methodology for Finding, Classifying, and Comparing Costs for Services in Long-Term Care Settings

Abt Associates Inc.
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August 1977

CLEARINGHOUSE

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CLEARINGHOUSE

A Methodology for Finding, Classifying, and Comparing Costs for Services in Long-Term Care Settings

A Draft Manual

August 12, 1977

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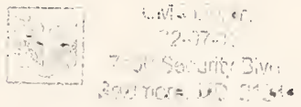

Prepared for

Social and Rehabilitation Services
Department of Health, Education, and Welfare
Washington, D.C. 20201

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PART 1 - INTRODUCTION

1.0 ORGANIZATION OF THE MANUAL (HOW TO USE THE MANUAL)

This manual provides directions for implementing a methodology that compares the costs of providing care to chronically ill or disabled patients across different long-term care settings. This introductory section, Part 1, explains the methodology and provides an overview of the data collection and analysis.

Part 2 contains directions for making contact with sites at which data will be collected and for setting up the site visits. Directions for collecting the data are provided in Part 3, and Part 4 outlines the steps required to translate collected data into their final form in order to enable comparisons of costs across settings.

1.1 The Methodology: Its Purpose and Uses

This methodology has been designed to allow cost comparisons for similar patients in different types of long-term care settings. Since all costs are considered, patients with similar needs in both inpatient and outpatient settings can be compared. The unique aspect of this methodology is that it enables a comparison which takes into account the differences in both the patient population and the services provided. Settings that can be compared using this methodology are: skilled nursing facilities, intermediate care facilities, day care centers, home health agencies, congregate living facilities, and multiservice centers.

This methodology will be especially valuable to those policymakers and planners at the Federal and state levels who must make decisions that affect the development and support of different types of service delivery settings or that relate to the reimbursement of services under governmental health programs.

1.2 How the Methodology Works

To arrive at a cost per type of patient in various service settings, three kinds of information are collected and then linked together.

First, information on patients is gathered to enable their categorization into 24 patient profiles. This allows comparisons of the distribution of patients by profiles across settings, as shown in Exhibit 1.1

Second, the services that these patients receive both within and outside the setting are identified and are quantified in terms of hours. This allows comparison of the type and intensity of services received by patients in different profiles both within settings (Exhibit 1.2) and across settings (Exhibit 1.3).

Third, the costs of providing each type of service in each type of setting is calculated. These costs are then associated with the intensity of the services received by each profile type to determine the cost of each service and then the total cost of care. The cost of each patient profile type can then be compared within the care-setting and across the various different settings (Exhibits 1.4 and 1.5).

1.2.1 The Patient Profiling System

A system for grouping patients into homogeneous categories has been developed based on three variables:

- the patient's functional status,
- the presence or absence of medical risk factors, and
- the mental status and orientation of the patient.

The first, functional status, is obtained from an assessment of patients' independence or dependence in six daily self-care functions: bathing, dressing, toileting, moving from bed to chair, self-control of elimination, and feeding. Based on patients' abilities to perform these activities, they are grouped into three categories: independent, partially dependent, and dependent.

The second variable is the presence of selected medical risk factors that influence prognosis and, ultimately, differences in utilization of services. The presence or absence of certain health conditions, or risk factors, determines the degree of severity of an illness or disability as well as the patient's prognosis.

EXHIBIT 1.1
NUMBER OF PATIENTS IN EACH PROFILE BY SETTING

SETTING \ PROFILES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
																								3
																								0
	1	2	3																					4

EXHIBIT 1.2
AVERAGE HOURS OF SERVICES PROVIDED PER MONTH TO PATIENTS BY PROFILE: SETTING A

SERVICES \ PROFILES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Medical Care																								
Mental Health																								
Nursing - General																								
Nursing - Specialized Services																								
Physical Therapy																								
Occupational Therapy																								
Speech & Hearing Therapy																								
Recreational Activities																								
Case Management																								
Personal Care																								
Homemaking/Housekeeping																								
Special Education																								
Vocational Education																								
Dietary Services																								
Podiatry																								
Dental Care																								
Optometry																								
Inhalation Therapy																								
Patient Transportation																								
Non-Specific Patient Supervision																								
Other																								

EXHIBIT 1.3
AVERAGE NUMBER OF NURSING SERVICE HOURS PROVIDED TO PATIENTS BY PROFILE ACROSS SETTINGS

SETTING \ PROFILES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

EXHIBIT 1.4

SERVICE COSTS BY PATIENT PROFILE TYPE PER MONTH
(INTERNAL AND TOTAL)

Setting _____

PROFILES / SERVICES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Medical Care																								
Mental Health																								
Emotional Support																								
Nursing General																								
Nursing Specialized																								
Physical Therapy																								
Occupational Therapy																								
Speech & Hearing Therapy																								
Recreational Activities																								
Personal Care Services																								
Homemaking/Housekeeping																								
Special Education																								
Vocational Education																								
Case Management																								
Dietary Services																								
Podiatry																								
Dental Care																								
Optometry																								
Inhalation Therapy																								
Patient Transportation																								
Non-Specific Patient Supervision																								
Food																								
Building Costs																								
Total Internal Costs																								
Total External Costs																								
GRAND TOTAL																								

EXHIBIT 1.5

TOTAL COST PER MONTH OF PROVIDING SERVICES TO PATIENTS ACROSS SETTINGS BY PROFILE

SETTING NAME \ PROFILE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	$32.00	$10.00	$63.00																					$1000.00
	98.00																							
	109.00																							

The selective use of certain risk factors (in the Patient Profiling System) can have greater value than diagnosis in evaluating the severity of disability for the relative prognoses of patient classes, and thus in predicting the differential utilization of services. Such risk factors include the diseases themselves and the more general symptomatology which, when present, decrease a patient's chances for improvement and increase his chances for regression or premature death. A list of risk factors has been established, based on a literature review, on expert opinion, and on experience. If any of these risk factors (which are listed in Question 10 of the Patient Profile Survey) is clinically evident, it will have been entered in the medical record of the patient. The risk factors are divided into two groups. Patients may have one or more risk factors in either or both groups.

Group I contains those conditions whose prognoses are particularly poor (i.e., those with a high probability of producing excessive disability and premature death). These risk factors include: (a) cancer; (b) coronary disease or heart attack, or the use of digitalis or a related drug; (c) stroke; and (d) high BUN (blood urea nitrogen), 30 mg. per ml. or more. (The last is a highly significant indicator of chronic renal disease.)

Group II consists of risk factors which also indicate a poor prognosis, but are somewhat less traumatic in impact than the first group. They include: (a) diabetes mellitus, or the use of a blood-sugar reducing drug; (b) blindness; (c) rheumatoid arthritis; (d) multiple sclerosis; (e) high blood pressure; (f) mental illness; and (g) chronic respiratory disease (chronic obstructive pulmonary disease, bronchitis, asthma or emphysema).

Once risk factors are identified, the patient can be classified into one of four possible categories (see Exhibit 1.6):

- no risk factors present;
- risk factors from Group II present;
- risk factors from Group I present; or
- risk factors from both Groups I and II present.

Exhibit 1.6

RISK FACTOR GROUPINGS

Group I	Group II
a) cancer (occurring within the last ten years) b) coronary or heart attack or use of digitalis or related drug c) stroke (C.V.A.) d) kidney disease or BUN (Blood Urea Nitrogen) of 30 mg. or more per 100 ml.	a) diabetes mellitus or use of blood-sugar reducing drug b) blindness (patient is legally blind) c) rheumatoid arthritis d) multiple sclerosis e) hypertension or blood pressure of 150/100 or higher f) mental illness (organic or non-organic psychoses only) g) chronic respiratory disease (chronic obstructive pulmonary disease, emphysema, bronchitis, asthma)

If the Patient Has:	Then the Risk Factor Category is:
No risk factors	A
Risk Factors from Group II only	B
Risk Factors from Group I only	C
Risk Factors from both Groups I and II	D

The third variable used in grouping patients is mental status. Patients are profiled based on whether or not they suffer from mental disorder. The presence or absence of mental disorder and the patient's state of orientation have great influence on the care setting in which a patient can be safely placed. Mental disorder is indicated when the patient's primary diagnosis is organic or nonorganic mental illness, or when evident from the caregiver's responses to questions that have been designed to assess the patient's state of orientation. The result is a dichotomy: presence or absence of mental illness.

The Patient Profiling System is illustrated schematically in Exhibit 1.7 on the following page. Combinations of the three variables--functional status, risk factors, and mental status--yield a total of twenty-four patient profiles.

To implement the Patient Profiling System, data on each patient must be collected from a provider of care who is familiar with that patient. Patient data are then analyzed along the three paramters discussed above: functional status, the presence or absence of specific risk factors, and mental status. As a result of this analysis, patients are sorted into the twenty-four profiles.

1.2.2 Services Received

A set of definitions for services which chronically ill or disabled patients commonly receive has been developed for use in this methodology. These are listed in Exhibit 1.8 which appears on the following pages. With one exception, these are functional definitions, based on the type of service or care rendered, and are not dependent on the identity of the person providing the service. For instance, nursing services can be provided by Registered Nurses, Licensed Practical Nurses, or aides. Only medical services are specifically defined as those services provided by a physician.

For patients sampled, the providers of services interviewed are asked to identify the services provided to the patient within and outside of the setting for a specific time period (day, week or month), and to estimate the amount of those services.

Exhibit 1.7

PATIENT PROFILING SYSTEM

Functional Status	Risk Factors	Mental Disorder	Patient Profile
Independent	None	No	1
		Yes	2
	II	No	3
		Yes	4
	I	No	5
		Yes	6
	I & II	No	7
		Yes	8
Partially Dependent	None	No	9
		Yes	10
	II	No	11
		Yes	12
	I	No	13
		Yes	14
	I & II	No	15
		Yes	16
Dependent	None	No	17
		Yes	18
	II	No	19
		Yes	20
	I	No	21
		Yes	22
	I & II	No	23
		Yes	24

Exhibit 1.8

SERVICE DEFINITIONS

1. Medical Care (Physicians only)

   Services aimed at the prevention, diagnosis, and treatment of diseases and their complications, including physical examinations; medical history; diagnostic tests; order medications; etc. (excluding psychiatrists, but including ophthalmology).

2. Mental Health Services

   Psychotherapy, counseling, and emotional support, on a scheduled basis, to patients and/or their families by persons trained in mental health.

3. Emotional Support

   Informal talking with the patient about his or her medical or psychological problems. This service can be given by any provider.

4. General Nursing Services

   Nonspecialized, routine nursing procedures, including monitoring vital signs; supervision and/or administration of medications; position changes; history; etc.

5. Specialized Nursing Services

   Specialized treatment and rehabilitative procedures, including intravenous feedings and medications; skin care; dressings; suctioning: tracheotomy care, nasal-gastric tubes; colostomy irrigation; R.O.M. exercises; bowel/bladder training; etc.

6. Physical Therapy

   Specialized restorative treatments involving the use of exercise, heat, cold, electricity ultrasound, and/or massage.

7. Occupational Therapy (usually provided by ROT or COTA)

   Specialized restorative treatment involving the use of sensory integration exercises, perceptual-motor techniques, skill practice, and training for independence in activities of daily living.

8. Speech and Hearing Therapy (usually provided by Speech Therapist)

   Treatment of specific communication disorder.

9. Recreational Activities

   Structured leisure and work activities, either individually or in groups, to help patients meet their normal needs for physical exercise, social interaction, and sensory and intellectual stimulation.

10. Personal Care Services

    Assistance with activities of daily living (e.g., help with bathing, dressing, grooming, feeding, getting from bed to chair, use of toilet or bedpan, etc.)

11. Homemaking/Housekeeping Services

    Assistance with household maintenance activities, including shopping, cooking, cleaning, laundry, minor repairs, etc.

12. Special Education

    Education activities aimed at improving the patient's ability to function better in daily activities, such as teaching how to read a clock, how to read, how to balance a checkbook, etc.

13. Vocational Education

    Vocational training service aimed at improving a patient's social role functioning and/or ability to become economically self-supporting.

14. Case Management

The individual coordination of all direct services to the patient, including case conferences; progress monitoring; linkage with community resources; discharge planning; advocacy; consultation; and any charting in the patient's medical or other records.

15. Dietary Services

Instruction in diet restrictions and/or planning or preparation of special (medically prescribed) diets.

16. Patient Transportation

Any movement of patients by staff to treatment rooms or activities. Can include guiding patients, pushing wheelchairs, leading, driving car or van, etc.

17. Podiatry

Any podiatric preventive, curative, or rehabilitative service; usually provided by a podiatrist.

18. Dental Care

Any preventive, curative, or restorative dental service.

19. Optometry

Any service aimed at correcting or enhancing a patient's vision (not opthalmology services).

20. Inhalation Therapy

Treatment of specific respiratory problems involving the use of medical gases, drugs, and/or specialized equipment.

21. Nonspecific Patient Supervision

Time spent by staff in monitoring patients or passively supervising activities to ensure that care is provided at all times. Includes nurses' night duties when patients are asleep as well as strict watching of patients performing non-treatment oriented activities such as viewing television.

1.2.3 Development of Service Costs

The purpose of the cost portion of this methodology is to provide a means to compare the cost of care for similar chronically ill patients across settings. The cost of providing nursing services, for example, to patients in a nursing home can be examined and then compared to the cost of providing nursing services to the same patient in a home care program. Cost comparison of this sort is fraught with problems: service definitions vary; cost data are not always available; cost data are not available on a service basis, but rather on a department basis; department definitions vary; costs of services are not accurate because in many institutions care is provided free of charge or by volunteers. Given these institutional constraints, a method was developed that takes them into consideration and is summarized here.

There are two major underlying premises of this cost-finding methodology. First, the most meaningful cost comparison is based upon the cost of services. This type of comparison allows for a more accurate comparison of costs than do traditional methods. For example, cost per patient day in an Intermediate Care Facility may not be equivalent to the cost per patient day in a Skilled Nursing Facility because services provided in the two settings may vary widely. Using this methodology, the costs are disaggregated into costs for services provided. The notion is that by carefully defining services, then identifying the costs for these services, similar entities can be compared.

Since institutions do not as a rule maintain their financial records by services, but rather by departments, a method is needed to translate department costs into service costs. The major part of this methodology accomplishes this translation. In order to provide an overview of the steps involved in developing the cost per service hour, the following outline gives a sequential description of all the steps.

- Data are collected on the following items:
  -- the number (in FTEs) and type of caregivers or providers, in each department of the care setting,
  -- the average salary of each type of caregiver,
  -- the allocation of caregivers' time among the services defined in Exhibit 1.8, and
  -- the cost for each department in the care setting divided into two categories: personnel and non-personnel costs.

- Costs are imputed for all services provided at no cost to the care setting.

- Certain cost items are set aside so as to allow for more accurate comparison of inpatient and outpatient costs. These costs include the cost of food and all costs associated with the physical facilities, such as depreciation of property and property insurance.

- All other departmental costs are divided into two groups, overhead and direct service departments. Exhibit 3.1 provides a list of the departments in each category.

- The costs of the overhead departments are allocated to the direct service departments on a proportional basis. The result is a loaded direct service departmental cost.

- The loaded direct service departmental costs are then allocated to the caregivers to arrive at an hourly rate for each type of caregiver in a department. The hourly rate is comprised of the base salary, an allocation of departmental non-personnel costs, and an allocation of the general overhead for the entire care-setting, divided by the number of patient-care hours per year ("patient-care hours" are all hours spent delivering direct services to patients).

- These hourly caregiver rates are used to calculate the cost per hour of each service through the use of the time allocation data collected. The total hours worked by each caregiver type are divided among the various services they provide. The mix of different providers delivering the same service is used to calculate a weighted average cost per service hour, simply called a cost per service hour.

- Cost per service hour is then multiplied by the average number of hours of each service received per month by patients in each profile category. The result is the average cost of each service by patient profile type. The sum of these service costs plus the costs previously set aside equals the total monthly cost by patient profile type.

- The final step of the methodology involves the development of cost data for services received outside the care-setting visited. These external costs are added to the "internal" costs to determine the grand total for each patient profile group. External costs include costs for food and shelter for patients using ambulatory care settings.

The resultant monthly services costs by profile type can be compared across settings as shown earlier in Exhibit 1.5.

1.3 Summary of Data Collection

The three types of information required to implement the methodology relate to the patient, the service provided, and the cost. All of these data must be collected on site. The data needed to place a sample of patients into the profiles and then to calculate the services they receive will be gathered through one data collection instrument. This instrument, the Patient Profile Survey (see Appendix A), is administered to those caregivers who are most familiar with the patients and the services they recieve.

Collection of cost data is more complex. This will require interviews with several different types of people at each site, beginning with the administrator and including the comptroller (or equivalent person), department heads, and one of each type of direct service provider (charge nurse, nurse's aide, physical therapist, etc.). In addition, financial records will be a primary source of basic cost data.

Site visit teams will be comprised of two people who will each average two days per site--the length of time varying with the complexity and availabilty of financial records, the size of the setting, and the number of patients included in the sample chosen. The team member responsible for collecting the cost data must possess thorough grounding in and understanding of health cost and accounting systems.

1.4 Data Analysis

Once the data have been collected, they can be translated into the final products through the step-by-step process described in Part 4. This data analysis requires an average of four person-days per site, with variations dependent on the complexity of financial information and the number of patients sampled per site.

PART 2 - SETTING UP SITE VISITS

2.0 INTRODUCTION

The implementation of this methodology requires a fairly extensive data collection effort. This section provides directions on how to prepare for each site visit. Thorough preparation is vital to a smooth-running data collection effort and will avoid costly wasted time.

There are two steps in preparing for the actual site visit. First, establish contact with the administrator or appropriate person at each site. In this initial contact, describe the study and secure permission to include the site in the study. Second, in follow-up contacts, provide specific details of the study's data needs and the sources for obtaining the data at the site, and confirm the dates of the site visit.

Preparation for site visits can take from two to four weeks or more, depending upon the number of approvals needed before permission can be secured for the data collection. Those sites which need governing board approval will require longer lead-in times.

It is recommended that each site team be comprised of two staff members. One person should be responsible for administering the patient sample questionnaires; the other should collect the cost data. Staff should allow an average of two days per site for each two-person site team. The time needed to complete data collection may be longer or shorter than two days depending upon the size, complexity of the site, the organizational structure, and on the availability of the data.

2.1 Establish Contact

Once sites have been chosen for inclusion in the study, establish contact with the administrator or chief executive of each site. This initial contact, which may be made by telephone, should provide the administrator with a basic understanding of the study and should be the mechanism by which permission for collecting data at that setting is requested.

During this initial contact, explain the purpose of the study and its sponsorship. In addition, describe the nature of the data to be collected and the involvement of the project staff required to gather this data. A list of the data collection elements is provided in Exhibit 2.1 on the following page.

2.2 Provide Follow-up Details

Through a follow-up letter, provide specific details of the data that will be collected, the amount of time needed to complete the data collection effort, the number of research staff expected to be on site, the extent of involvement of project staff, and the intended use of the data. A sample follow-up letter is provided in Exhibit 2.2. Include with the letter a written statement of data needs similar to Exhibit 2.1.

It is important that project staff understand the level of effort required for the data collection before the site visit begins. One should not try to minimize the requirements of the study, since this could result in either alienating the site personnel, or in wasting time during the site visit.

Once the date of the site visit has been set, it should be confirmed in another letter to the site contact person.

Exhibit 2.1

DATA COLLECTION REQUIREMENTS

Type of Information	Recommended Source	Time Required to Collect Data
I. General Background and Organization	Administrator	30 minutes
II. Staffing of Program • Number of FTE in each department by provider type • Average salary for each provider type	Controller or Personnel Department or Department Heads	60 minutes
III. Financial Background	Controller	20 minutes
IV. Patient Profiles (up to 40)	Providers familiar with patients	10 minutes per profile
V. Allocation of Provider Time	1) One of each type of provider, and 2) Supervisor for each direct service department	1) 5 minutes per provider 2) 30 minutes per each supervisor
VI. Financial Information	Financial staff person and financial records	3-4 hours*

*Financial staff will only need to be present for a small portion of this time.

Exhibit 2.2

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February 7, 1977

Mr. Anthony Salter
Administrator
Sunny Farm ICF
R.F.D. 10
Hillsdale, Iowa

Dear Mr. Salter:

When we talked on Friday concerning a field visit to Sunny Farm ICF, I said that I would send you a more detailed description of our needs while on site. This information is provided herein. First, however, let me briefly summarize the project we are working on.

As I mentioned on the telephone, the purpose of the project is to gather data which when analyzed will allow for the comparison of services received and treatment costs to similar chronically ill and disabled patients across different settings (both inpatient and outpatient). The method we are using first profiles patients, accounting for differences in their physical and mental status. It then identifies the cost per unit of providing services to patients in each patient profile. To perform these two tasks, two types of methodologies are used: one for focusing on patient profiles and a second focusing on cost analysis. We will be going to 10 field sites in the Hillsdale area and collecting the same data for each site.

Specifically, the field site visit requires interviews with you, the comptroller, providers, and supervisors. The attachment to this letter summarizes our information needs and sources. The time required for most providers will be minimal except for the nursing staff. The nursing department is one of the most important sources of information because it will provide information for both the patient profile and the cost methodology. More specifically, we will need to perform two sets of interviews. The first will be with nurses to collect patient profile information on roughly 40 patients. The second set will be with RNs, LPNs, and aides, concerning hours of service delivered. One of each of the three types of staff will be interviewed for both the day and evening shifts. This second type of interview will be necessary for one of each type of provider in the ICF.

I have enclosed a copy of the patient profile interview to be administered by our staff to nurses or aides (or other appropriate staff) concerning patient profiles. If the personnel are familiar with the patients, then the interview only takes 8-10 minutes. To create as little burden on the caregivers as possible, we would like to split the 40 profiles among three or four providers.

Obviously the data gathering is extensive and thus we have allocated two days to perform the work. I hope you do not find this too much of a burden on your staff. If you have any questions, please feel free to call.

Sincerely yours,

RS/gg

Enclosures

PART 3 - GOING ON SITE

3.0 INTRODUCTION

A site team should be comprised of two persons, one to be primarily responsible for collecting the patient and service data, and one to collect the cost data. As previously noted, the person who performs the cost-finding component of the study should be familiar with cost-reporting systems, budgeting and financial reports of health care settings.

The first step in the data collection should be a meeting between the site team and the administrator of the setting during which Form A should be completed. After this meeting, the two team members split up. The team member responsible for patient and service data collection will interview appropriate providers of care. The team member responsible for cost data will interview the appropriate financial staff members and will review the necessary financial records. Either team member can be responsible for interviewing providers on the allocation of their time. The decision should be based upon which staff member finishes his/her initial tasks first.

3.1 The Interview with the Administrator - Form A

The administrator of the site must be interviewed using Form A before other site work begins. This interview will collect general background information on the site. It also gathers information that will determine the succeeding steps in the data collection process--such as which staff members will be interviewed.

The administrator and the site team must discuss the process of selecting a sample of patients in each facility to be profiled. Although the selection process need not be approached in a scientifically exact manner, it should provide for a fair representation of all wards, clinics, or other institutional divisions, as well as for the patient mix represented in the setting. In smaller settings (30 or fewer patients), all patients may be profiled. In larger settings, a sufficient number should be chosen to represent the patient population--between 20 and 40. The patient sample can be selected randomly by taking every nth patient on a cardex (in nursing homes) or every nth medical record (in ambulatory settings).

Once a decision has been made on how the patient sample will be drawn, the administrator should designate those providers of care who will be interviewed to obtain the necessary information on patients. (This decision may be delegated to the Director of Nursing.) Generally, these caregivers are nurses familiar with the patients. A sufficient number of caregivers should be chosen for interviews so that no one caregiver will be overburdened. A limit of 15 patients per caregiver is reasonable.

ADMINISTRATOR PROTOCOL

Name of the Institution

Site Characteristics

1. Type of Control

   a. Voluntary Non-Profit

      Church ☐ Other ☐

   b. Proprietary

      Individual ☐ Partnership ☐

      Corporation ☐ Other ☐

   c. Government

      Federal ☐ State ☐

      County ☐ City ☐ Other ☐

2. How long has this organization been functioning? _____ years

3. a. If the facility has inpatients:

      Number of beds _____

      Number of admissions _____

      Number of patient days _____

      Average Occupancy _____

   b. If the facility has outpatients:

      Caseload _____

      Number of visits (or encounters) _____

4. What is the catchment area served? _____

5. How old are the buildings and facilities? (Ranges Acceptable) _____

6. On a blank page, ask the administrator to draw an organizational chart (or, if one is available, ask for a copy).

7. Explain the data needs using Exhibit 2.1 Ask the administrator if the Comptroller or the financial person can provide information on departmental staffing. If not, ask who can.

8. Discuss the patient sample selection process and determine which staff will provide patient data.

3.2 Collection of Patient and Service Data

All of the information necessary for assigning a profile category to a patient is gathered in Questions 9 through 16 of the Patient Profile Survey Questionnaire (see Appendix A). Caregivers who are most familiar with patients (usually RNs or LPNs) should be interviewed, and a questionnaire should be filled out for each patient. The caregiver should have the patients' medical records on hand, since these records will contain some of the information required.

The Patient Profile Survey Questionnaire enables the collection of three types of information: (1) baseline information on socioeconomic status; (2) information on the patient's functional status, diagnosis, and mental status; and (3) specific information on the services received by the patient. To administer the Patient Profile Survey Questionnaire follow these steps:

1. Once the administrator or the director of nursing has determined the easiest and best method of selecting a fairly representative sample of patients to be profiled, follow this method in conducting this phase of the study. For example, in a skilled nursing facility organized into four wings, it could be decided to choose ten patients from each wing. At each nursing station, the caregiver would pull every other record until ten records have been selected.

2. The entire questionnaire and response log may be found in Appendix A. All but two questions, Numbers 16 and 17, are straightforward and require no additional instructions. Question 16 concerns the ability of the patient to perform indepedently six activities of daily living. The definitions of these activities are given below. Note that the criterion for independence used here is performance of an activity without supervision, direction or active assistance.

Activities of Daily Living

- Bathing: The use of either sponge bath, tub bath, or shower. Patients who require assistance in getting in or out of the tub, or in bathing more than one part of the body, are rated as dependent.

- Dressing: The act of getting clothes from closets and drawers, including underclothes, outer garments, and using fasteners (also braces, if applicable). Patients who remain partly or completely undressed are considered dependent.

- Toileting: The act of going to the toilet room for bowel and urine elimination, cleaning self after elimination, and arranging clothes. If patient uses bedpan or commode, he is considered independent if he is able to both use and empty it without assistance.

- Transfer: The act of moving in and out of both bed and chair. The patient may employ mechanical supports (cane, walker, etc.) and still be considered independent--as long as he does not require human assistance.

- Continence: Self-control of both urination and defecation. Cathether, regulated use of bedpans, occasional "accidents," etc. render the patient dependent.

- Feeding: The act of getting food from plate to mouth. Assistance in cutting meat or buttering bread is not considered dependence. Tube or intravenous feeding is automatically dependent.

3. The question which is often the most difficult for caregivers to answer is Number 17, which attempts to determine the amount of services received by each patient, both within and outside of the facility. To make this easier, prepare a list with all the services and their definitions. Before this question is asked, give the list to the caregiver to read. Emphasize that services provided both in and outside the setting are included.

   It may be easier for the provider to estimate time spent in providing services based on a typical week, rather than a month. Decide what is the easiest time period for the informant, note this on the top of the questionnaire, and, when necessary, the number of hours per month after the interview.

Although the collection of patient and service data is sometimes difficult for the first patient, it becomes easier for the caregiver to respond after interviews on several patients have been completed.

3.3 Introduction to the Collection of Cost Data

The ultimate goal of the cost-finding process is to produce a unit cost for each of the services provided by the setting. For many services, this is a cost per hour of service; for others, it is a cost per month per person. In order to arrive at these unit costs, three types of data need to be collected on site. They are:

1) Department and organizational information, including the types of providers that deliver care to chronic patients within the setting, and the number of full-time equivalents for each type of provider, or the number of hours worked per year for each group of providers;

2) Expense data, including the total salaries for each provider type, plus all nonsalary operating expenses of the setting; and

3) Time allocation for each type of caregiver--a percentage allocation of provider's time to various service categories.

This section of the manual discusses each type of data, their sources, and the forms used to collect them.

Note: For the purposes of this methodology, a "provider type" is defined as a group of providers, all of whom deliver some amount of direct patient care and all of whom spend similar proportions of their time delivering the same specific services. Although these functional groupings usually parallel job titles, they are not necessarily related to either job title, civil service class definition, or educational degree. Great care must be exercised to maintain this distinction throughout the cost-finding process. An example of the conflict between job title and provider type is:

> A SNF divides its nurses into RNs and LPNs (and probably maintains its salary data on this basis). However, the functional positions (i.e., provider types) at the setting are the nursing director, the charge nurses, the medication nurses, and the patient-care nurses. Most of these positions can be filled by either RNs or LPNs. In this situation, the data collected should be the number of personnel by both functional category and job titles.

Note also that the different shifts of a particular position (i.e., night nurse vs. day nurse) could conceivably provide a different mix of services and therefore constitute a distinct provider type. Each should be treated as such throughout the cost-finding process.

3.3.1 Departmental and Organizational Information; Forms B, C, and D

Form B: Department Worklist

The information on Form B should be obtained from either the Controller or the personnel office. The purpose of Form B is to lay out a detailed structure of the facility by listing all departments, and all provider types. When completing this form, use the organizational chart provided by the administrator to ensure that all departments are included.

As can be seen by looking at Form B, the information required is straightforward: the names of the department heads of each direct service department, the type of personnel in each direct service department, the average salary of each type, the number of full-time equivalents, and the employment status -- salaried or volunteer. See Exhibit 3.1 for a list of direct service departments.

If the financial person does not know the type of providers and the FTEs for each department, ask the personnel department for this information. If more than one shift is included, data must be collected on the schedules of each shift (i.e., how many of each type of staff work on each shift).

It is important that all providers who deliver direct care to patients in the setting be listed. This includes consultants who are retained by the institution. For each consultant list the type, the actual hours worked by the consultant in the care-setting on a yearly basis, and the actual amount paid to the consultant by the care-setting. If the consultant provided services on a fee-for-service basis to patients, note this in parentheses. Consultants commonly used in long term care-settings include physical therapists, podiatrists, physicians, dietitians, and speech therapists.

Setting _____ DEPARTMENT WORKLIST FORM B

Name of Department	Department Head	Provider Types	Number of FTEs or actual hours	Average Salary	Payment Mode (salary, consultant, volunteer)	Average Overtime Hours

Exhibit 3.1

DEPARTMENT CLASSIFICATION GUIDE

Overhead Departments	Direct Services
Admitting	Housekeeping
Medical Records	Laundry and Linen
Security	Nursing
Administration	Food Service
Personnel	Recreation
Finance	Physician Services
Transportation[1] (when not used to transport patients)	Dentistry
	Podiatry
	Opthalmology
	Optometry
	Physical Therapy
	Occupational Therapy
	Special Education
	Psychology
	Social Service
	Transportation[1] (when vehicles are used to transport patients)

[1] If motor vehicles are used, both for patients and administrative uses, then split the costs between overhead and direct service proportionally.

Form C: Department Exceptions

Form C is used to note the number of employees who work in security, maintenance, food service, housekeeping, and laundry departments and perform tasks not usually performed by persons in those departments. This information is necessary to ensure the development of accurate service costs.

To complete Form C, ask the controller (or the appropriate department head) if individuals in the departments listed, routinely perform "unusual tasks." Ask them to estimate how much time is spent on these tasks and by how many people. The interviewer should convert this information into full-time equivalents.

FORM C

DEPARTMENT EXCEPTIONS

DEPARTMENT NAME	USUAL TASKS	EXAMPLE OF UNUSUAL TASKS
Security	Guarding the facility, locking doors, unlocking doors, monitoring visitors coming and going, etc.	Transporting patients, maintenance work, other "non guard duty" activities Number (FTEs) | Task
Maintenance	Repair work, heavy cleaning, preventive maintenance of equipment, painting, loading and unloading supplies, etc.	Light cleaning or housekeeping tasks, food service work, laundry work Number (FTEs) | Task
Food Service	Preparation of food, serving, cleaning up, inventory, menu development, ordering of supplies, etc.	Housekeeping activities, laundry activities Number (FTEs) | Task
Housekeeping	Light cleaning, such as mopping, polishing furniture, cleaning bathroom fixtures, etc.	Maintenance activities Number (FTEs) | Task
Laundry	Collecting, washing, and drying linens, and bed clothes, etc.	Housekeeping activities Number (FTEs) | Task

Form D: Controller's Questionnaire

The first step in estimating the hourly cost of service in a setting is to define the number of hours available for direct service. Questions 1 through 7 of Form D define the number of hours per employee that are potentially available for direct service. Questions 8, 9, and 10 ask for other general information which will be used later. This data can usually be obtained from either the Controller, a financial staff person, or the personnel office. If exact data are not available, ask for estimates.

CONTROLLER'S QUESTIONNAIRE

1) How many holidays did employees receive? _____

2) How many days of vacation did an average employee take? _____

3) How many sick days did the average employee take during the period? _____
(If the answer to this question is not known, ask Question 4.)

4) How many sick days were allowed? _____

5) How many hours per week is considered fulltime? _____

6) Excluding mealtime and coffee breaks, how many hours does an employee normally work per day? _____

7) What is the policy for compensating employees for overtime? _____

_____

_____

8) What was the value of donated services last year? _____ What were they? _____

_____

_____

9) What was the value of goods donated last year? _____ What were they? _____

_____

10) Does the care-setting have any of the following on the premises? *(yes or no)*

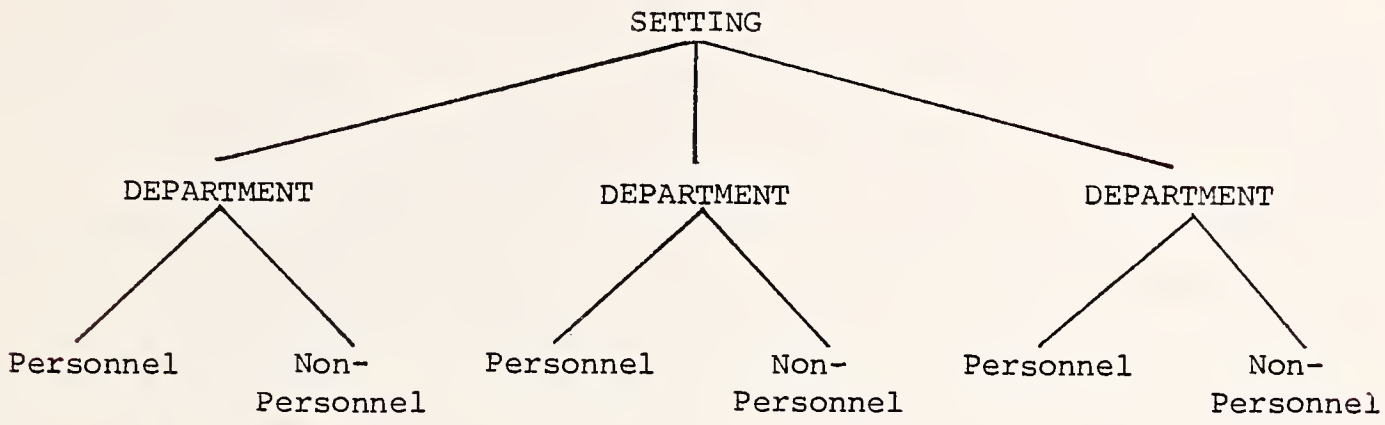
laboratory _____

radiology _____

pharmacy _____

3.3.2 Cost Data from Financial Records: Forms E, F, G, H, and I

The cost data needed for this methodology are described schematically below:



Basically, this is a simple breakout of departmental costs into personnel and nonpersonnel costs. These data can be obtained from a variety of sources depending upon how the setting is organized. Departmental budgets, Medicare and Medicaid cost reports, general ledgers, and year-to-date financial summaries all include this type of information. It may not be kept in exactly the format required by this methodology, but the information is still available nonetheless. Before choosing information sources in a particular setting, discuss the data needs with the controller (or equivalent) showing the forms presented in this section. He/she should be able to quide you to the appropriate source.

Form E: Cost-Finding Worksheet for Administration

When completed, this Form should include all the costs incurred by the institution for general administrative departments and those which cannot be associated with any particular department. To complete Form E, simply extract the data items from the selected source.

Note that Form E has a separate section for property related expenses. For the purposes of this methodology, it is important that all these expense items be aggregated separately from other administrative expenses. If one or more of the property expense costs has been allocated to the departments, they should be extracted from the departments and aggregated on Form E. Use the back of Form E as a worksheet for the computations. In summary, property-related expenses should appear only on Form E.*

Motor Vehicle expense is also listed separately on Form E. Enter all costs for transportation services in this section only if the motor vehicles are not used to transport patients.

* Note: If data on building-related depreciation and interest are not available from the settings's financial records, they must be calculated. Directions for these computations are given in Appendix B. Read through that section at this point to assure that all data needed for the process are collected while on site.

Setting _____ COST–FINDING WORKSHEET FORM E

Administration

EXPENDITURES	LAST FISCAL YEAR	
	ACTUAL	IMPUTED
A) GENERAL ADMINISTRATIVE EXPENSES		
1. Salaries and wages (for administration [1])		
2. Employee benefits (applicable item 1 only)		
3. Donated goods		
4. Contract/purchased services [2]		
5. Contributions (to charity etc.)		
6. Supplies		
7. Amortization		
8. Equipment repair and maintenance		
9. Depreciation–furniture & fixtures		
10. Non-building related interest		
11. Non-building related insurance		
12. Business taxes		
13. Bad debts		
14. In-service education		
15. Public relations		
16. Dues and subscriptions		
17. Conventions, conferences, etc.		
18. Security department expenses		
19. Telephone		
20. Other		
SUBTOTAL		
B) BUILDING AND RELATED EXPENSES		
1. Depreciation–building		
2. Depreciation–machinery and equipment		
3. Rent		
4. Interest		
5. Insurance		
6. Real estate taxes		
7. Maintenance department expenses		
8. Other building costs		
SUBTOTAL		
C) MOTOR VEHICLE EXPENSES		
1. Motor vehicle depreciation		
2. Vehicle maintenance		
3. Salaries & Wages (drivers)		
SUBTOTAL		

[1] Includes personnel, billing, admitting, and general administrative salaries and wages

[2] Includes accountants, legal services, pharmacy consultants, medical records consultants, and medical review consultants

Form F: Cost-Finding Worksheet for Fringe Benefits

Form F collects all fringe benefit expenses in one place. Fringe benefits (unlike property-related expenses) will later be allocated to each department. If these expenses are already allocated to various departments, this form need not be completed.

To complete Form F, simply transfer the data from the financial records. Occasionally, a setting will maintain vacation, sick and holiday salaries as separate line items. In this case only should these items be entered on this form.

If fringe benefits are not allocated to departments, then the costs which appear on Form E should be allocated to each department based on its personnel budget using a simple ratio to spread these costs to the various departments.

Summary of Expenditures
for Employee Benefits

EXPENDITURES	LAST COMPLETE FISCAL YEAR
FICA	
Hospital and Medical Insurance	
State Unemployment	
Workman's Compensation	
Federal Unemployment	
Bereavement	
Training	
Uniforms	
Vacation, annual leave*	
Sick*	
Holiday*	
TOTAL	

*only if maintained as separate line item.

Form G: Cost-Finding Worksheet for Departments

Form G is used to collect the remainder of the cost data. Complete it using the same source as Forms E and F. Follow these steps:

1. Label one cost-finding worksheet for each direct service department.

2. Across the top columns, enter the names of each provider type (one per column), and the number of FTEs of each type (or the number of hours worked per year). Include all persons working in the specific department.

3. Form C obtained information about personnel who work in one department but perform tasks associated with another department. Data on these personnel must not be included with the department where they work but rather with the department where the tasks are usually performed. If there is no such department to which these costs can be associated, use a new cost-finding worksheet and treat these costs as though they were a separate department.

4. Personnel costs should be allocated to salaries and wages, and donated services (volunteers) for each provider category. If personnel costs for the department are not broken down by provider, use Form H to allocate them. If fringe benefits are broken down by department, enter this figure in the total column.

5. The nonpersonnel costs for each department should be transferred onto the cost-finding worksheet from the financial records. Examine departmental costs to ensure that no items which are on Form E are included within individual departments.

6. If nonpersonnel costs are not allocated by department, but rather are contained in one or more general administrative accounts, enter these costs under "other" on Form E.

7. No consultants should be listed within a department -- all consultants should simply be listed as described earlier on Form B.

8. If transportation is used by patients only, the entire cost should be entered on Form G. If transportation is used for both patient and non-patient transport, the costs should be allocated. The cost of patient service should be entered on Form G and the cost of non-patient service should be entered on Form E.

COST FINDING WORKSHEET

FORM G

Setting _____

Department _____

INFORMANT _____
name

_____
title

EXPENDITURES	YEAR TOTAL ACTUAL	YEAR TOTAL IMPUTED	PROVIDER					
			HOURS					
			FTEs					
Salaries and Wages								
Fringe Benefits								
Contract Purchased Service								
Donated Services								
Donated Goods								
Supplies								
Other								
TOTAL								

Form H: Provider Cost Estimator Instructions

Some sites may not have financial records that break down personnel costs by provider categories. If this is the case, provider costs will have to be estimated. Follow these steps for Form H:

1. Label a form for each department.

2. For each provider type, list the average salary and FTEs from Form B.

3. If average salary was not provided on Form B, use the payroll records and calculate an average salary for each category of provider in the department list of Form B.

4. Complete Column 4 by multiplying Columns 2 and 3.

5. Column 5 shows the fraction of total personnel costs that are represented by each provider type. To arrive at this figure, total Column 4, then divide each figure in Column 4 by that total. Enter this number in Column 5 for each provider type.

6. In Line 12 of Column 6, enter the total personnel costs listed in the financial source being used for the department. Multiply this number by the proportion in Column 5 to arrive at an estimated cost for each provider type. Enter the figures in Column 6 on the "Salaries and Wage" line of the Cost-Finding Worksheet (Form G) for that department.

Setting _____

PROVIDER COST ESTIMATOR

FORM H

Department Name _____

	1 Provider Type	2 FTEs	3 Average Salary	4 **Total** (Col. 2 X Col. 3)	5 Index to 1.00	6 Financial Record Department Personnel Costs
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12	**TOTAL**				**1.00**	

Form I: Computing Costs for Volunteers and Consultants

Form I provides a simple method for estimating the costs of those consultants and volunteers who work in a care-setting but are not paid by the institution and therefore do not appear in the financial records. For example, cost data are not available if providers bill the patient directly or if they volunteer their services. The directions below apply to the use of Form I which collects information to determine the annual imputed cost of caregivers working on either a consultant or volunteer basis.

1. Referring to Form B, enter in Column 1 the caregivers who provide services on either a volunteer basis or are otherwise not paid by the institution.

2. In Column 2, estimate an annual salary of the individual in question. This can be done by:

   a) asking the controller what the "going rate" is for various provider types;

   b) calling a local institution to determine the average salary such a staff person would earn if working on a salaried basis;

   c) asking a private practitioner the consultation fee usually charged; or

   d) using minimum wage figures for nonprofessional volunteers.

3. Based on the information given on Form B, enter the average number of hours worked per week in Column 3.

4. Compute the full-time equivalent (FTE) for each provider by dividing Column 3 by the number of hours in a work week at the particular care setting (see Form D). Enter the number of FTEs in Column 4.

5. To complete Column 5, the annual imputed cost to the institution, multiply Column 4 by Column 2.

Setting _____ FORM I

COMPUTING COSTS FOR VOLUNTEERS AND CONSULTANTS

	1	2	3	4	5
	Provider	Average Salary Base (Response from Source)	Hours Worked Per Week in the Institution	FTE Represented by Column 3	Annual Imputed Cost to Institution
				Col. 3 ÷ ___	Col. 4 x Col. 2
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

3.3.3 Allocating Provider Time

Form J: Time Allocations

The Time Allocation Form is used to determine which patient care services are provided by each of the providers. The services are defined in Exhibit 1.8. The time allocation activity and therefore the use of Form J is limited to personnel listed below who provide direct care. A comprehensive but not exhaustive list is:

RNs	Physical therapists and aides	Psychologists
LPNs	Occupational therapists and aides	Recreational therapists
Nurses aides	Speech therapists	Recreational staff
Social workers and aides	Mental health workers	Health educators
Counselors		Department directors (who have patient contact)

To complete Form J, two sets of interviews are necessary: one set with the supervisor or department heads; and the second with caregivers. More specifically, the department heads or supervisors are asked to give information on how their staff allocate their time on a weekly basis and how they themselves allocate their time. Then one of each type of caregiver is asked directly how he/she spends his/her time on a weekly basis. For example, in a home care program, there might be a social service department having two social workers and three social worker aides, as well as a department head who is a social worker. If the department head provides services to patients, then this department would be said to have three types of caregivers who provide direct patient care. As a result, the configuration of time allocation interviews would be:

1. an interview with the department head concerning:
   - how he/she spends his/her time
   - how one of each category of staff spend their time (i.e., one social worker and one aide)
2. an interview with one social worker on how he/she spends his/her time
3. an interview with one social worker aide on how he/she spends his/her time

This process is followed for each department whose personnel provide direct patient care. Secretarial or other support staff who do not provide direct care are not interviewed. To complete Form J, follow these directions:

1. Write the name of the department at the top of the form.
2. In the columns labeled Provider Type, write in the types of personnel listed for that department (Form B) who are direct caregivers. Use one wide column for each type of caregiver. If there is more than one shift, treat each one independently.
3. To complete Column A, ask the department head to describe his/her own activities as well as the activities of one representative from each caregiver type. Ask the department head to estimate the percentage of time typically spent each week performing each activity mentioned. To make this task easier for the providers responding to these questions, show them a copy of the service definitions provided in Exhibit 1.8. All activities performed must be translated into these definitions. The interviewer is responsible for reconciling the activities with the definitions.
4. Follow the same procedure when interviewing the caregivers about themselves.
5. Persons must account for 100 percent of their working time.
6. After Columns A and B are completed, complete Column C by averaging the two percentages in Columns A and B. If a column is blank, treat it as a zero.
7. Compute the direct patient care subtotal for Column C by adding all the percentages above that line.
8. Computer the direct service percentages in Column D by dividing each direct patient care percentage in Column C by the direct patient care subtotal. Enter each percentage in Column D and check that they total 100 percent.

Department _____ TIME ALLOCATION WORKSHEET FORM J

	SERVICES	PERCENTAGE OF TIME SPENT PROVIDING EACH SERVICE FOR EACH CAREGIVER TYPE											
		Provider:				Provider:				Provider:			
		A Dept. Head	B Care-Giver	C Average	D %	A Dept. Head	B Care-Giver	C Average	D %	A Dept. Head	B Care-Giver	C Average	D %
DIRECT PATIENT CARE SERVICES	Medical Care												
	Mental Health												
	Emotional Support												
	Nursing Care – General												
	Nursing Care – Specialized												
	Physical Therapy												
	Occupational Therapy												
	Speech and Hearing Therapy												
	Recreational Activities												
	Personal Care												
	Homemaking/Housekeeping												
	Special Education												
	Vocational Education												
	Case Management												
	Dietary Services												
	Podiatry												
	Dental Care												
	Optometry												
	Inhalation Therapy												
	Patient Transportation												
	Non-specific Patient Supervision												
	Other												
	Subtotal				100%				100%				100%
OTHER	Supervision and Inservice Training												
	Administrative												
	Total	100%	100%	100%		100%	100%	100%		100%	100%	100%	

PART 4: ANALYZING THE DATA

4.0 INTRODUCTION TO DATA ANALYSIS

After all the data have been collected, they must be sorted so that certain calculations can be performed to arrive at the cost per patient profile type. Part 1 of this manual has already given a summary of all the steps involved in the methodology. This section of the manual proceeds step by step, using all the data collected thus far, to arrive at the final results--the cost per month by patient profile type and by type of service.

The team member who collected the patient and cost data at each site should be responsible for translating their respective data onto forms which can be used for analysis.

4.1 Patient Profile Analysis

Form K: Determining Patient Profiles

The data from each Patient Profile Survey Questionnaire should be used to determine the proper patient profile for each patient. One Patient Profiling Worksheet (Form K) should be filled out for each setting.

1. Refer to the answers to Question 16 to score the patient's functional status (see Exhibit 4.1). For any checks in Columns 2 or 3, one point is scored. (Note: the higher the score, the more dependent the patient.) Refer to Exhibit 4.2, Functional Status Categorization, to determine the functional status category for each patient. Enter this functional status category for each patient on the Patient Profiling Worksheet.

2. Compare the answers to Question 10 with the table shown in Exhibit 4.3. If no risk factors are present, score A; if risk factors from Group II only are present, score B; if risk factors from Group I only are present, score C; and if risk factors from both Group I and Group II are present, score D. (Note: the number of conditions within either Group I or Group II does not change the rating, once one condition is present.) For example, a patient with cancer and rheumatoid arthritis (from Group I and II, respectively) will be scored D.) Enter the Risk Factor Rating on the Patient Profiling Worksheet.

3. Examine the responses to Questions 9, 10j, 11, 12, 13, 14, and 15. For any of the following responses, the patient is rated as "having a mental disorder."

   - if a mental illness is the primary diagnosis in Question 9;
   - if the answer to Question 10j is "yes;"
   - if the answer to Question 11 is other than "oriented;"
   - if any answers to Questions 12-15 are "yes."

   In any of these cases, enter on the Patient Profiling Worksheet, Column III, "present." Otherwise, enter "absent" in this column.

4. To determine the patient profile, match the information from the Patient Profiling Worksheet with Exhibit 4.4. Enter the Patient Profile Category in Column IV. Also enter this number on the front of the Patient Profile Survey Form.

FORM K

PATIENT PROFILING WORKSHEET

Setting: _____

STAGE	I	+	II	+	III	=	IV
Patient Number	Functional Status Category (from Worksheet I)		Risk Factor Category (from Stage II, Step b)		Mental Disorder Present or Absent (from Stage III, Step a)		Profile Category

Exhibit 4.1

PATIENT PROFILE QUESTIONNAIRE
(Question 16)

16. Now we would like to ask some questions about the patient's activities of daily living.	Score 0	Score 1	
a. Is the patient able to bathe himself without help? (PROBE) 1. Receives no assistance (gets in and out of tub by self if tub is usual means of bathing) 2. Receives assistance in bathing only one part of the body (such as back or a leg) 3. Receives assistance in bathing more than one part of the body (or patient is not bathed)	1( )	2( )	3( )
b. Is the patient able to dress without help? (PROBE) 1. Gets clothes and gets completely dressed without assistance 2. Gets clothes and gets dressed without assistance except for assistance in tying shoes 3. Receives assistance in getting clothes or getting dressed, or stays partly or completely undressed	1(✓)	2( )	3( )
c. Is the patient able to use the bathroom without help? (PROBE) 1. Goes to toilet room, cleans self, and arranges clothes without assistance (may use object for support such as cane, walker, or wheelchair and may manage night bedpan or commode) 2. Receives assistance in going to toilet room or in cleaning self or in arranging clothes after elimination or in use of night bedpan 3. Doesn't go to room termed "toilet" for the elimination process	1( )	2( )	3(✓)
d. Is the patient able to transfer from bed to chair? 1. Moves in and out of bed as well as chair without assistance (may be using object for support such as cane or walker) 2. Moves in and out of bed or chair with personal assistance 3. Doesn't get out of bed	1( )	2(✓)	3( )
e. Is the patient usually continent? 1. Controls urination and bowel movement completely by self 2. Has occasional "accidents" 3. Supervision helps keep urine or bowel control; catheter used, or is incontinent	1(✓)	2( )	3( )
f. Is the patient able to feed himself without help? 1. Feeds self without assistance 2. Feeds self except for getting assistance in cutting meat or buttering bread 3. Receives assistance in feeding or is fed partly or completely by using tubes or intravenous fluids	1( )	2(✓)	3( )
FUNCTIONING SCORE	0		4

Exhibit 4.2

FUNCTIONAL STATUS CATEGORIZATION

Level of Function Score	Functional Status Category
0 1	Independent
2 3	Partially Dependent
4 5 6	Dependent

Exhibit 4.3

RISK FACTOR GROUPINGS

Group I	Group II
a) cancer (occurring within the last ten years)	a) diabetes mellitus or use of blood sugar reducing drug
b) coronary or heart attack or use of digitalis or related drug	b) blindness (patient is legally blind)
c) stroke (C.V.A)	c) rheumatoid arthritis
d) kidney disease or BUN (Blood Urea Nitrogen) of 30 mg. or more per 100 ml.	d) multiple sclerosis
	e) hypertension; or blood pressure of 150/100 or higher
	f) mental illness (organic or non-organic psychoses only)
	g) chronic respiratory disease (chronic obstructive pulmonary disease, emphysema, bronchitis, asthma)

If the Patient Has:	Then the Risk Factor Category is:
No risk factors	A
Risk factors from Group II only	B
Risk factors from Group I only	C
Risk factors from both Groups I and II	D

Exhibit 4.4

PATIENT PROFILING SYSTEM

Functional Status	Risk Factors	Mental Disorder	Patient Profile
Independent	None (A)	No	1
		Yes	2
	II (B)	No	3
		Yes	4
	I (C)	No	5
		Yes	6
	I & II (D)	No	7
		Yes	8
Partially Dependent	None (A)	No	9
		Yes	10
	II (B)	No	11
		Yes	12
	I (C)	No	13
		Yes	14
	I & II (D)	No	15
		Yes	16
Dependent	None (A)	No	17
		Yes	18
	II (B)	No	19
		Yes	20
	I (C)	No	21
		Yes	22
	I & II (D)	No	23
		Yes	24

4.2 Service Data Analysis: Forms L-1, L-2, and M

Form L-1: Intensity of Services Provided Within Setting

Once all patients in the setting have been placed in a profile category, the average number of service hours per patient profile can be calculated. This is first done by each service (medical, general nursing, etc.) and is then aggregated for the entire facility. Finally, a comparison of the intensity of services provided across settings can be compared, if desired.

Complete Form L-1, Intensity of Services Provided Within Settings, using a separate form for each service provided in the setting. This information is taken from responses to Question 17 on the Patient Profile Survey. Once all service hours have been transferred from the questionnaire, each row can be totaled. Divide the row total by the number of patients in each profile category to calculate the average number of service hours for each. Be sure to count patients who did not receive a particular service when dividing the total hours of that service by the total number of patients in the profile.

FORM E-1

INTENSITY OF SERVICES PROVIDED WITHIN SETTINGS

Setting: _____

Type of Service _____

Patient Profile	Number of Hours of Services Provided/Month															Total	Average
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

APPENDIX A: PATIENT PROFILE QUESTIONNAIRE
APPENDIX B: CALCULATION OF
APPENDIX C: GLOSSARY OF TERMS
APPENDIX D:

Form L-2: Intensity of Services Provided Externally

Form L-2 is slightly different from Form L-1. This form records all the services received outside the setting that are given as answers to Question 17 of the Patient Profile Questionnaire. These services will be called external services.

To complete Form L-2:

1. Fill in the top column with the patient profile numbers of each patient in the sample. Cluster all the same profile numbers together.

2. In the column labeled Services, use every other line to enter the types of services received.

3. For each patient write in the number of hours of each service received and who provided the service. (See example in Appendix D.) Use the key for coding the source of care.

FORM L–2

Setting Name: _____

Setting Type: _____

SERVICES									

Setting _____

SERVICE COSTS BY PATIENT PROFILE TYPE PER MONTH
(EXTERNAL)

FORM Z

SERVICES \ PROFILES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Medical Care																								
Mental Health																								
Emotional Support																								
Nursing-General																								
Nursing-Specialized																								
Physical Therapy																								
Occupational Therapy																								
Speech & Hearing Therapy																								
Recreational Activities																								
Personal Care Services																								
Homemaking/Housekeeping																								
Special Education																								
Vocational Education																								
Case Management																								
Dietary Services																								
Podiatry																								
Dental Care																								
Optometry																								
Inhalation Therapy																								
Patient Transportation																								
Non-Specific Patient Supervision																								
Food																								
Building Costs																								
Total External Costs																								

Form M: Average Service Hours by Patient Profile Type

Use the last columns of each Form L-1 to complete Form M. Beginning with Medical Care, list the average hours of service provided to each patient profile type horizontally on Form M. Continue this process for each service received by patients.

FORM M

Setting _____

AVERAGE SERVICE HOURS BY PATIENT PROFILE TYPE

SERVICES \ PROFILES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Medical Care																								
Mental Health																								
Emotional Support																								
Nursing - General																								
Nursing - Specialized Services																								
Physical Therapy																								
Occupational Therapy																								
Speech & Hearing Therapy																								
Recreational Activities																								
Case Management																								
Personal Care																								
Homemaking/Housekeeping																								
Special Education																								
Vacational Education																								
Dietary Services																								
Podiatry																								
Dental Care																								
Optometry																								
Inhalation Therapy																								
Patient Transportation																								
Non-Specific Patient Supervision																								
Other																								

4.3 Analysis of "Internal" Cost Data (Forms N through X)

Form N: Consultant Cost Calculations

Consultants who provide direct patient care were enumerated on the department worklist (Form B). These data will now be used to compute a cost per hour for the various consultants used by the care-setting.

Form N calculates an hourly rate both for consultants paid by the institution and for those that bill patients on a fee-for-service basis.

1. Enter all consultants in Column A.

2. Enter the annual cost for each consultant.

   a. If the consultant is paid by the institution, this amount should be found on Form B and entered in Column B.

   b. If the consultant is not paid by the institution, it can be found on Form I, Column 5 and entered in Column C.

3. Column D is the total of Column B and Column C.

4. Calculate and enter the hours worked in Column E. This should be available from Form B or from Form I, Column C.

5. Columns F, G, and H are self explanatory.

Consultant costs are set aside at this point and picked up again at the final stages of the service cost calculations.

DETERMINATION OF CONSULTANT COSTS FORM N

Setting _____

A	B	C	D	E	F	G	H
Consultant Provider Type	Actual Cost	Imputed Cost	Total	Hours Worked Per Year (Hrs/wk X 52)	Cost Per Hour Actual (B ÷ E)	Cost Per Hour Imputed (C ÷ E)	Cost Per Hour Total (F + G)

Form O: Building Costs

Form O is self explanatory: simply fill in each line with the data from Form E. Note that taxes are not added, but rather subtracted from the total. Costs imputed for depreciation and interest should be included in the imputed column.

After the calculation of the cost per month, building costs are set aside until the end of the calculation of the unit service costs.

Setting _____ FORM O

DETERMINATION OF BUILDING COSTS

	ACTUAL	IMPUTED	TOTAL
Depreciation-Building			
Depreciation-Machinery and Equipment			
Rent			
Interest			
Insurance			
Utilities (heat, light, water)			
Plant Operation and Maintenance			
Real Estate Taxes (subtract)	( )		( )
Total (per year)			
Cost per Month (Total ÷ 12)			
Cost per patient per month (Monthly Cost ÷ by average census)			

Form P: Food Costs

Form P is very simple. Take all costs from the food service department for food and supplies and enter these on the appropriate lines in Form P. Again, as on Form O, make sure that all imputed items are included. Note that no salaries are included as part of "food costs."

Setting _____ FORM P

DETERMINATION OF COST OF FOOD

	ACTUAL	IMPUTED	TOTAL
Raw Food			
Kitchen Supplies			
Total (per year)			
Cost per month (Divide by 12)			
Cost per person per month (monthly cost divided by average census)			

Form Q: Allocation of Overhead Department Costs

The remainder of the cost data must be organized such that all costs are reflected by direct service departments. This means that overhead or non-direct service costs will be allocated to the direct service departments. The result of the allocation of overhead to the direct service departments is called the "total loaded department cost."

Form Q is used to accomplish the allocation described above. Follow these steps:

1. Use Exhibit 4.5 to determine which departments should be considered overhead departments and which should be considered direct service departments. All those listed under "overhead" should be listed in the overhead department section of Form Q. Note that transportation is considered either overhead or as a direct service depending upon how the motor vehicles are used.

2. In the lower half of Form Q in Column A, enter the names of the direct service departments. Do not enter any costs included on Forms N, O, and P which deal with consultants, building, or food.

3. Complete Columns B and C from the cost-finding worksheets (Forms E and G).

4. Fill in Column D by adding Columns B and C.

5. Column E is computed by dividing the costs of each direct service department by the total direct service cost in Column D.

6. To complete Columns F, G, and H, multiply the percentage in Column E times the total actual overhead, the total imputed overhead, and the total overhead from Columns B, C, and D, respectively.

7. Column I is the sum of Columns B and F.

8. Column J is the sum of C and G.

9. Column K is the sum of J and I.

10. Check the calculations, by confirming that the total site costs in Columns B, C, and D equal the totals in I, J, and K, respectively.

At this point, the form is completed. If pharmacy, lab, and x-ray appear as direct service departments, line them out at this point. They will not be included as costs or services by this methodology for reasons explained in Part 1.

FORM Q

ALLOCATION OF OVERHEAD DEPARTMENT COSTS

Setting: _____

A		B	C	D	E	F	G	H	I	J	K
DEPARTMENT NAMES		DEPARTMENT COSTS			FRACTION OF DIRECT COSTS	OVERHEAD DEPARTMENT COSTS ALLOCATED TO DIRECT SERVICE DEPARTMENTS			LOADED DEPARTMENT COSTS		
		ACTUAL	IMPUTED	**TOTAL**		ACTUAL	IMPUTED	**TOTAL**	DIRECT SERVICE ACTUAL	DIRECT IMPUTED	TOTAL
OVERHEAD DEPARTMENTS											
	TOTAL OVERHEAD										
DIRECT SERVICE DEPARTMENTS											
	TOTAL DIRECT SERVICE				**1.00**						
TOTAL SITE COSTS											

Exhibit 4.5

DEPARTMENT CLASSIFICATION GUIDE

Overhead Departments	Direct Services
Admitting	Housekeeping
Medical Records	Laundry and Linen
Security	Nursing
Administration	Food Service
Personnel	Recreation
Finance	Physician Services
Transportation[1] (when not used to transport patients)	Dentistry
	Podiatry
	Opthalmology
	Optometry
	Physical Therapy
	Occupational Therapy
	Special Education
	Psychology
	Social Service
	Transportation[1] (when vehicles are used to transport patients)

[1] If motor vehicles are used both for patients and for administrative uses, split the costs between overhead and direct service proportionally.

Form R: Determination of the Number of Hours Worked Per Care-Giver Type

In order to accurately determine costs per service hour, it is necessary to have an accurate picture of the number of hours represented by an FTE employee. Because the number of hours can vary from site to site by hundreds of hours per year, it is important to determine the number of hours worked per FTE for each care-setting visited. Form R is a stepwise form which uses information from Form D, Controller's Questionnaire.

1. Fill in Lines 1 and 2 with data from Form D.

2. Multiply Line 2 by 52.

3. Calculate the number of vacation, sick, and holiday hours. given (taken) per year.

4. Subtract the hours calculated for sick, holiday and vacation hours per year from the hours worked per year to obtain the net hours worked per year.

5. Use the table to calculate the number of hours worked per year for each caregiver type.

The data from the table can be used to fill in gaps in Form G, Cost-Finding Worksheet for Departments.

Setting _____ FORM R

HOURS PER CARE-GIVER TYPE

1. Hours worked per day (Form D, excluding breaks and lunch)) _____
2. Hours worked per week (Form D, excluding breaks and lunch) _____
3. Hours worked per year (Line 2 x 52 weeks per year) _____
4. Vacation hours per year (vacation days from Form D x Line 1 above) (_____)
5. Sick hours per year (sick days from Form D x Line 1 above)) (_____)
6. Holiday hours per year (holidays from Form D x Line 1 above) (_____)
7. Net hours worked per year _____
8. To determine paid working hours by provider category, multiply the number of FTEs by net hours worked per year (Line 7):

	Column 1	Column 2	Column 3	Column 4
	Provider Category	Number of FTEs (See Form B)	Net Hours Worked Per Year (Line 7)	Total Hours Worked (Col. 2 x Col. 3)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

Form S: Percentage Distribution of Patient Care Wages

The cost per caregiver hour is the result of allocating all of the loaded departmental costs among caregivers, and then dividing by the number of service hours. More specifically, the resultant cost per caregiver hour is the actual salary plus an allocation of overhead from the care-setting and an allocation of nonpersonnel costs from the caregiver's department divided by the actual service hours for that caregiver group.

To allocate the nonpersonnel portion of costs, a proportion is used. Form S is used to determine this proportion. The following directions are for the completion of Form S.

1. Label a Form S for each direct service department shown on Form Q (except for lab, pharmacy, and x-ray).

2. In Column A, enter the names of each direct care provider in each department. This information can be found on Form G.

3. Transcribe the actual and imputed wages for each provider from the Cost-Finding Worksheet into Columns B and C of Form S.

4. In Column D, enter the hours worked per year for each provider type from Form G or Form R.

5. In Column E, place the subtotal percentage of time spent on patient care activities (Form Q, Column C) for the provider in question. For providers who were not interviewed assume 100% of their time is patient care. For example, physicians will always spend 100% of their time on patient care.

6. Column F equals E times D.

7. Column G equals Column B times Column E.

8. Column H equals Column C times Column E.

9. Column I equals Column H plus Column G.

10. Column J equals $\left[\text{Column I}_{\text{Line n}} \div \text{Column I}_{\text{Total}}\right]$

Setting _____

FORM S

PERCENTAGE DISTRIBUTION OF PATIENT CARE WAGES

Department Name: _____

	A	B	C	D	E	F	G	H	I	J
		TOTAL WAGES					PATIENT CARE WAGES			
	PROVIDER TYPE	ACTUAL	IMPUTED	HOURS WORKED	% OF TIME DEVOTED TO PATIENT CARE	PATIENT CARE SERVICES HOURS	ACTUAL	IMPUTED	TOTAL	DISTRIBUTION OF PATIENT CARE WAGES
1										
2										
3										
4										
5										
6										
7	TOTAL									1.00

APPENDIX A: PATIENT PROFILE QUESTIONNAIRE
APPENDIX B: CALCULATION OF
APPENDIX C: GLOSSARY OF TERMS
APPENDIX D:

Form T-1 and T-2: Hourly Rates for Caregivers

The purpose of these two forms is to distribute nonpatient care costs to providers on an equitable basis using a proportion called "J" found on Form S, and then to arrive at actual and imputed costs per caregiver hour. The two forms are identical in appearance and use, except for their sources of data. As a result, the following directions apply to both forms:

1. Label a Form T-1 for each department. In addition, for each direct service department which has imputed costs listed on Form Q, label a Form T-2.

2. On Line a, enter the loaded department costs for the department in question. For actual costs, use Column I; for imputed costs, use Column J, Form Q.

3. On Line b, enter the patient care costs for the department in question. This information comes from Form S, Column G, Line 7 for actual costs; and from Form S, Column H, Line 7 for imputed costs.

4. Line c is the difference between Lines a and b.

5. In Column 1, list all the caregivers in the department who provide direct patient care.

6. Place the corresponding J factor from Form S in Column 2.

7. Column 3 is simply the product of Column 2 times Line c above.

8. The information in Column 4 is taken from Form S, Column G for actual salary costs, and from Form S, Column H for imputed costs.

9. Column 5 is the sum of Column 3 and Column 4.

10. Column 6 is the patient care service hours taken from Form S, Column F, Line n. If a provider has both imputed and actual costs, both are divided by the same number of patient care hours, as taken from Form S, Column F.

11. Column 7 is Column 5 divided by Column 6. This final column is the hourly rate for the caregiver shown in Column 1. These rates will be used to develop service costs per hour.

Setting _____ FORM T-1

ACTUAL HOURLY RATES FOR CARE-GIVERS

DEPARTMENT_____

a) LOADED DEPT. COST_____ Form Q, Col. I

b) Subtract PATIENT CARE COSTS (_____) Form S, Col. G, Line 7 =

c) NON PATIENT CARE COSTS_____

Col. 1 Care-Giver Type	Col. 2 Distribution Factor Col. J, Form S, line n	Col. 3 Col. 2 x c	Col. 4 Salary Cost for this Care-Giver – Form S, Col. G, line n	Col. 5 Total Actual Care-Giver Costs Col. 3 + Col. 4	Col. 6 Patient Care Service Hours Form S, Col. F line n	Col. 7 Hourly Rate for this Care-Giver Actual Col. 5 ÷ Col. 6

APPENDIX A: PATIENT PROFILE QUESTIONNAIRE
APPENDIX B: CALCULATION OF
APPENDIX C: GLOSSARY OF TERMS
APPENDIX D:

IMPUTED HOURLY RATES FOR CARE-GIVERS

DEPARTMENT_____

a) LOADED DEPT. COST_____ Form Q, Col. J

b) Subtract PATIENT CARE COSTS (_____) Form S, Col. H, Line 7 =

c) NON PATIENT CARE COSTS_____

Col. 1 Care-Giver Type	Col. 2 Distribution Factor Col. J, Form S, line n	Col. 3 Col. 2 x c	Col. 4 Salary Cost for this Care-Giver — Form S Col. H, line n	Col. 5 Total Imputed Care-Giver Costs Col. 3 + Col. 4	Col. 6 Patient Care Service Hours Form S, Col. F line n	Col. 7 Hourly Rate for this Care-Giver Imputed Col. 5 ÷ Col. 6

Form U: Distribution of Provider Hours by Services

The purpose of this form is to allocate the total patient care services hours for each provider type (found on Form S, Column F) among the various types of services provided. This is done by using the percentage distribution of caregivers' time which was calculated on Form J.

To complete Form U, follow these steps:

1. In the space marked "caregiver type" label one wide column for each type of provider in the setting. Include everyone, even those who were not interviewed (housekeeping, food service, physicians, etc.)

2. In the space labeled "total hours" enter the total number of patient-care hours from Form S, Column F.

3. Copy the direct service percentage which appears in in Column D of Form J for each service listed on the left for the provider in question.

4. Multiply the percentages by the total patient care hours.

5. Some providers (and all consultants) were not interviewed. They do, however, provide services. These providers' time should be allocated to services using Exhibit 4.6 as a guide. Allocate 100% of the time of these providers to the one service which corresponds most closely to the provider type.

DISTRIBUTION OF PROVIDER HOURS BY SERVICES

FORM U

SERVICES	CAREGIVER TYPE:		CAREGIVER TYPE:		CAREGIVER TYPE:		CAREGIVER TYPE:	
	Percent of Time Spent	Service Hours Provided	Percent of Time Spent	Service Hours Provided	Percent of Time Spent	Service Hours Provided	Percent of Time Spent	Service Hours Provided
Medical Care								
Mental Health								
Emotional Support								
Nursing – General								
Nursing – Specialized								
Physical Therapy								
Occupational Therapy								
Speech & Hearing Therapy								
Recreational Activities								
Personal Care								
Homemaking/Housekeeping								
Special Education								
Vocational Education								
Case Management								
Dietary Services								
Podiatry								
Dental Care								
Optometry								
Inhalation Therapy								
Patient Transportation								
Non-Specific Patient Supervision								
Other								
	100%	TOTAL HOURS	100%	TOTAL HOURS	100%	TOTAL HOURS	100%	TOTAL HOURS

Exhibit 4.6

PROVIDERS AND SERVICES

Providers	Services
Physician	Medical Care
Inhalation Therapist	Inhalation Therapy
Podiatrist	Podiatry
Dentist	Dental Service
Psychiatrist	Medical Care- Mental Health
Opthalmologist	Medical Care
Optometrist	Optometry
Housekeeper	Homemaking/Housekeeping
Housekeepers' Aide	Homemaking/Housekeeping
Laundry Worker	Homemaking/Housekeeping
Food Service Supervisor	Homemaking/Housekeeping
Food Service Aide	Homemaking/Housekeeping
Dishwasher	Homemaking/Housekeeping
Tray Person	Homemaking/Housekeeping
Psychologist	Mental Health
Social Worker	Case Management
Physical Therapist	Physical Therapy
Vocational Therapist	Vocational Therapy
Adult-sitter	Nonspecific Patient Supervision

Form V: Service Costs Worksheet

To transform cost-per caregiver hour to cost-per-service hour the service hour allocations from Form U are used. Basically, the amount of time allocated to various service activities is used as a means to determine the weighted average costs of delivering a specific service on an hourly basis. This weighted average cost is simply called the cost-per-service hour.

Follow these steps in using Form V:

1. Label a Form V for each service provided in the setting.

2. To complete Column A, enter all caregiver types who provide the service named at the top of the form. This information is obtained from Form U. Form U also gives the number of hours for each service. Enter this information in Column E.

3. In Columns B and C, enter the hourly rates for caregivers from Form T-1 and T-2.

4. Column F is Column B times Column E.

5. Column G is Column C times Column E.

6. Column H is the sum of Columns F and G.

7. Divide the total line of Columns F, G, and H by the total service hours provided in Column E. This final calculation results in the total cost per service hour in Column H.

FORM V

Setting_____

SERVICE COST WORKSHEET

Service Type: _____

	A	B	C	D	E	F	G	H
	TYPE OF CARE-GIVER	CAREGIVER COST/HOUR			SERVICE HOURS PROVIDED	COSTS		
		ACTUAL	IMPUTED	TOTAL		ACTUAL	IMPUTED	TOTAL
1								
2								
3								
4								
5								
6								
7								
8								
9	TOTAL							
10	Costs divided by total service hours							

APPENDIX D:
APPENDIX C:
CALCULATION OF
PATIENT PROFILE

Form W: Summary of Service Costs

Form W is a summary of the costs-per-service-hour calculated using the Service Cost Worksheet, Form V. To complete Form W, simply copy Line 10 of the last three columns of each Form V onto the appropriate line on Form W.

SUMMARY OF SERVICE COSTS

Setting _____

A	B	C	D	E
SERVICE	UNIT OF SERVICE	COST/UNIT OF SERVICE		
		TOTAL	ACTUAL	IMPUTED
Medical Care	Cost/Hour			
Mental Health	Cost/Hour			
Emotional Support	Cost/Hour			
Nursing — General	Cost/Hour			
Nursing — Specialized	Cost/Hour			
Physical Therapy	Cost/Hour			
Occupational Therapy	Cost/Hour			
Speech & Hearing Therapy	Cost/Hour			
Recreational Activities	Cost/Hour			
Personal Care	Cost/Hour			
Homemaking/Housekeeping	Cost/Hour			
Special Education	Cost/Hour			
Vocational Education	Cost/Hour			
Case Management	Cost/Hour			
Dietary Services	Cost/Hour			
Podiatry	Cost/Hour			
Dental Care	Cost/Hour			
Optometry	Cost/Hour			
Inhalation Therapy	Cost/Hour			
Patient Transportation	Cost/Hour			
Non-Specific Patient Supervision	Cost/Hour			
Food	Co/Mo/Per			
Shelter	Co/Mo/Pers			

Form X: Determination of Monthly Service Costs by Patient Profile

On Form X, the hours of service by patient profile and service are displayed. The cost for these hours of service is determined by multiplying service costs (which have been assembled on Form W) by the number of hours of service on Form M. To complete Form X, simply multiply the numbers on Form M by the service costs on Form W.

Building costs and food costs should be found on Forms O and P, respectively. Place these on Form X. Total the columns.

The costs which appear as the totals in these columns are the total monthly costs by patient profile incurred for treatment within the care-setting. These are "internal costs." In order to estimate the total cost of care, services received from other sources should be included. The remaining forms focus on the estimation of external costs.

Note: There will be costs for some services for which no hours are entered on Form M. These services include general nursing care, home-making/housekeeping, case management, and dietary. The service hours (and costs) for these services should be allocated to patients equally. Divide the total number of hours of service in Column E of Form V by the average census or the average monthly enrollment. The result is the average number of hours received per patient per month. Multiply these hours by the costs per service hour on Form W and enter the results on Form X for each profile category. Other service hours will not appear on Form M because none of the patients profiled happened to have received them. The costs of these services should not necessarily be allocated to all patients.

Setting _____

FORM X

SERVICES \ PROFILES	1	2	9	20	21	22	23	24
Medical Care								
Mental Health								
Emotional Support								
Nursing-General								
Nursing-Specialized								
Physical Therapy								
Occupational Therapy								
Speech & Hearing Therapy								
Recreational Activities								
Personal Care Services								
Homemaking/Housekeeping								
Special Education								
Vocational Education								
Case Management								
Dietary Services								
Podiatry								
Dental Care								
Optometry								
Inhalation Therapy								
Patient Transportation								
Non-Specific Patient Supervision								
Food								
Building Costs								
Total Internal Costs								
Total External Costs								
GRAND TOTAL								

Setting _____

SERVICE COSTS BY PATIENT PROFILE TYPE PER MONTH
(INTERNAL AND TOTAL)

FORM X

SERVICES \ PROFILES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Medical Care																								
Mental Health																								
Emotional Support																								
Nursing-General																								
Nursing-Specialized																								
Physical Therapy																								
Occupational Therapy																								
Speech & Hearing Therapy																								
Recreational Activities																								
Personal Care Services																								
Homemaking/Housekeeping																								
Special Education																								
Vocational Education																								
Case Management																								
Dietary Services																								
Podiatry																								
Dental Care																								
Optometry																								
Inhalation Therapy																								
Patient Transportation																								
Non-Specific Patient Supervision																								
Food																								
Building Costs																								
Total Internal Costs																								
Total External Costs																								
GRAND TOTAL																								

4.4 External Cost Analysis

Forms Y and Z: External Service Cost Estimates

Thus far this methodology has focused only on internal costs. Patients, however, do receive care from other settings. All costs associated with other sources are called external costs. These costs are estimated using the responses to the last question (Q 17) on the Patient Profile Questionnaire. In this question providers are asked to respond concerning the type and amount of services received by the patient from providers in other care settings. The amount of services is expressed in hours per month.

In order to estimate external costs based upon these hours, basic cost data must be developed. These costs should relate to the provider of the service. In order to estimate the costs, follow these steps:

1) Sort through the responses to Q 17 for all patients interviewed and write down the sources of care or caregiver and list each type of response once. Sort the source of care into three categories: physician, other health professional, and non-professional. Cost will be estimated for caregivers in each group. If a provider states that patients receive services from a day care program, meals on wheels, a home care program, state welfare department, church group, or any other social service agency, ignore these. No costs will be estimated for these because it is impossible to do so accurately. The list should include caregivers for whom external costs will be estimated; for example, physicians: psychiatrists, internists, cardiologists, neurologists, surgeons, opthalmologists, general practitioners; other health professionals: dentists, podiatrists, social workers, dietitians, physical therapists; non-professionals: family members, friends, housekeepers, maids. Place the list in Column 1 of Form Y.

2) To estimate the cost of an hour of service from one of these caregivers, a base salary must first be estimated. A number of sources can be used for the estimates:

   a) Physicians: Data on physicans' salaries can be obtained from the American Medical Association. This information is published periodically by type of physician. Every specialty may not be available, thus certain types of physicians must be grouped together. Group non-surgical subspecialties together, surgical specialties together, and primary practitioners together.

   b) Other Health Professionals: Data on other health professionals are available from two sources, the census and the Bureau of Labor Statistics. Because these data are constantly being updated by studies, they are not provided here. If old data (more than two years old) are the only information available, then adjust for inflation using the increase in medical care index.

c) Non-Professionals: The cost of all non-professional service hours should be estimated using the minimum wage as the base salary.

All base salary estimates should be placed in Column 2 of Form Y.

3. Once all the salary estimates have been made, an overhead rate should be applied. Although overhead rates for health programs vary drastically, it was found that they cluster around 50 percent. Thus without access to better information, it is recommended that a factor of 50 percent be used for overhead. Multiply all annual salary estimates for all providers by a 50 percent overhead rate in Column 4, Form Y.

4. In Column 6, Form Y divide the adjusted salaries by 2,088 hours to arrive at an hourly rate for each caregiver. The hourly rate is to be multiplied by the number of hours of each service.

5. On Form L-2, on each line of the key, next to the provider title, place the hourly rate for the provider as estimated on Form Y. Multiply the hourly rate by the hours of service shown for each patient and enter the product on the second line of each patient/service cell. Add up all the costs for each service within each profile and divide by the number of patients in the profile. As on Form L-1, be sure to divide by the total number of patients in each profile (and not just those who received the service). Enter the resulting average on Form Z.

6. Form Z will still not be complete for food and building. These lines need only be completed for ambulatory settings. It is recommended that the same amount be used to estimate these costs for all ambulatory settings. The best source is the Bureau of Labor Statistics data on budgets for retired couples. This is published periodically by the BLS. Use 55 percent of the retired couple's budget. The data provided by the BLS are presented in Exhibit 4.7.

Once external costs have been estimated, return to Form X and add external costs to internal costs to arrive at the grand total cost for each patient profile. Final cost comparisons can be made using the tables shown in Exhibits 4.8 and 4.9.

FORM Y

HOURLY RATES FOR EXTERNAL COSTS (ESTIMATES)

	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6
	Caregivers	Estimate Base Salary	Medical Care Index Adjustment	Col 3 x Col 2	Col 4 x 1.50	Hourly Rate Col 5 ÷ 2088 Hours/year
PHYSICIANS						
OTHER HEALTH PROFESSIONALS						
NON PROFESSIONALS						

Setting _____

FORM Z

SERVICES \ PROFILES	1	2	19	20	21	22	23	24
Medical Care								
Mental Health								
Emotional Support								
Nursing-General								
Nursing-Specialized								
Physical Therapy								
Occupational Therapy								
Speech & Hearing Therapy								
Recreational Activities								
Personal Care Services								
Homemaking/Housekeeping								
Special Education								
Vocational Education								
Case Management								
Dietary Services								
Podiatry								
Dental Care								
Optometry								
Inhalation Therapy								
Patient Transportation								
Non-Specific Patient Supervision								
Food								
Building Costs								
Total External Costs								

Setting _____

SERVICE COSTS BY PATIENT PROFILE TYPE PER MONTH
(EXTERNAL)

FORM Z

SERVICES \ PROFILES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Medical Care																								
Mental Health																								
Emotional Support																								
Nursing-General																								
Nursing-Specialized																								
Physical Therapy																								
Occupational Therapy																								
Speech & Hearing Therapy																								
Recreational Activities																								
Personal Care Services																								
Homemaking/Housekeeping																								
Special Education																								
Vocational Education																								
Case Management																								
Dietary Services																								
Podiatry																								
Dental Care																								
Optometry																								
Inhalation Therapy																								
Patient Transportation																								
Non-Specific Patient Supervision																								
Food																								
Building Costs																								
Total External Costs																								

Exhibit 4.7

ANNUAL BUDGETS FOR RETIRED COUPLE

Component	Lower Budget	Intermediate Budget	Higher Budget
Total budget[1]	$4,228	$6,041	$8,969
Total Family Consumption	4,046	5,678	8,277
Food	1,334	1,766	2,210
Housing	1,410	2,043	3,199
Transportation	272	527	971
Clothing	195	328	506
Personal Care	120	176	258
Medical Care	534(P)	537(P)	540(P)
Other Family Consumption	181	301	595
Other Items	182	363	692

[1] For the autumn 1973 and autumn 1974 updating of the budgets for a retired couple, the total budget is defined as the sum of "total family consumption" and "other items." The estimation procedure for the personal income tax component of the retired couple's budget is being reviewed for consistency among the budget areas with respect to the taxation of various sources of income and wealth for elderly persons plus the manner in which certain types of tax credits may be claimed.

(P) Preliminary Estimate

Note: Because of rounding, sums of individual items may not equal totals.

Source: U.S. Bureau of Labor Statistics

EXHIBIT 4.8

COSTS PER MONTH OF PROVIDING MEDICAL SERVICES TO PATIENTS ACROSS SETTINGS BY PROFILE

SETTING NAME \ PROFILE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

EXHIBIT 4.9
TOTAL COST PER MONTH OF PROVIDING SERVICES TO PATIENTS ACROSS SETTINGS BY PROFILE

SETTING \ PROFILES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

APPENDIX A

PATIENT PROFILE SURVEY QUESTIONNAIRE

Abt Associates Inc.
55 Wheeler Street
Cambridge, MA 02138

OMB No. 83-S-76003
Expiration Date: 12/31/77

PATIENT PROFILE SURVEY

INTERVIEWER QUESTION SHEET

1. What is the patient's age? _____

2. What is the patient's sex? _____

3. What is the patient's marital status? _____

4. What is the patient's race?

   -- White (not of Hispanic origin)
   -- Black
   -- Hispanic
   -- Asian or Pacific Islands
   -- American Indian or Alaskan Native
   -- Other (Specify)

5. How long has the patient been at this facility, or been receiving services here (excluding short hospital stays)?

   -- Less than 3 months
   -- 4 - 6 months
   -- 7 months - 1 year
   -- 13 months - 2 years
   -- More than 2 years

6. What does patient consider his/her usual residence? (SELECT ONLY ONE RESPONSE)

   Check only if patient has resided in an institution for more than two years. SKIP TO QUESTION 8.

   - Private Residence
   - Commercial Rented Rooms
   - Domiciliary/Personal Care Facility
   - ICF
   - SNF
   - Chronic Disease/Rehabilitation Hospital
   - Mental Hospital
   - Other (Specify)

7. Does patient usually live . . .

   -- Alone
   -- With spouse
   -- With children
   -- Both spouse and children
   -- With other family members
   -- With non-family member(s)
   -- With foster care
   -- Other (Specify)

8. What kind of health insurance coverage does the patient have? (CHECK ALL THAT APPLY)

   -- Private insurance
   -- Medicare
   -- Medicaid
   -- Workmen's Compensation
   -- Union Benefit Programs
   -- Fraternal Organizations
   -- CHAMP-VA
   -- Other (Specify)
   -- No insurance

9. What is the patient's primary diagnosis? (The reasons for present treatment)

10. Does the patient have any of the following conditions? (READ LIST AND CHECK ALL THAT APPLY--Yes, No, Don't Know)

   a) Cancer (occurring with the last ten years)
   b) Coronary or heart attack or use of digitalis or related drug
   c) Stroke (C.V.A.)
   d) Kidney Disease, or BUN 30 mg. or more per 100 ml.
   e) Diabetes mellitus or use of blood sugar reducing drug
   f) Blindness (patient is legally blind)
   g) Rheumatoid arthritis
   h) Multiple Sclerosis
   i) Hypertension; or blood pressure of 150/100 or higher
   j) Mental illness (organic or non-organic psychoses only)
   k) Chronic respiratory disease (chronic obstructive pulmonary disease, emphysema, bronchitis, asthma)
   l) Other significant conditions (specify)

11. How would you describe this patient's mental status? Is he/she. . . (READ LIST AND CHECK ONE RESPONSE)

   If checked, SKIP TO QUESTION 13 { Comatose
   { Oriented (as to time, person, and place)
   Partially disoriented (as to time, person, and place)
   Disoriented (as to time, person, and place)

12. If partially disoriented or disoriented, does this patient require staff supervision or monitoring of his/her actions? (Yes, No, Don't Know)

13. Does the patient ever read newspapers, magazines, or other printed matter? (Yes, No, Don't Know)

14. Does the patient often forget recent events, such as what he/she ate for lunch or whether he/she had a visitor yesterday (Yes, No, Don't Know)

15. Does the patient forget distant events, such as when he/she was born or where he/she was born? (Yes, No, Don't Know)

16. Does the patient have unpredictable or extreme mood shifts? (Yes, No, Don't Know)

17. Would the patient know he/she should not wander into a busy street if out alone? (Yes, No, Not Appropriate)

18. How would you describe this patient's ability to walk? Would you say he/she. . . (READ LIST AND CHECK ONE RESPONSE)

-- Walks freely
-- Walks with mechanical assistance (e.g., cane, crutches, walker, prostheses)
-- Walks only with personal assistance
-- Does not walk, but moves freely in wheelchair
-- Confined to bed or chair

19. Now we would like to ask some questions about the patient's activities of daily living.

a) Is the patient able to bathe himself without help? (PROBE)

1. Receives no assistance (gets in and out of tub by self if tub is usual means of bathing)
2. Receives assistance in bathing only one part of the body (such as back or a leg)
3. Receives assistance in bathing more than one part of the body (or patient is not bathed)

b) Is the patient able to dress without help? (PROBE)

1. Gets clothes and gets completely dressed without assistance
2. Gets clothes and gets dressed without assistance except for assistance in tying shoes
3. Receives assistance in getting clothes or getting dressed, or stays partly or completely undressed

c) Is the patient able to use the bathroom without help? (PROBE)

1. Goes to "toilet room," cleans self, and arranges clothes without assistance (may use object for support such as cane, walker, or wheelchair and may manage night bedpan or commode, emptying same in morning)
2. Receives assistance in going to "toilet room" or in cleansing self or in arranging clothes after elimination or in use of night bedpan or commode
3. Doesn't go to room termed "toilet" for the elimination process

d) Is the patient able to transfer from bed to chair?

1. Moves in and out of bed as well as chair without assistance (may be using object for support such as cane or walker)
2. Moves in or out of bed or chair with personal assistance
3. Doesn't get out of bed

e) Is the patient usually continent? (PROBE)

1. Controls urination and bowel movement completely by self
2. Has occasional "accidents"
3. Supervision helps keep urine or bowel control; catheter is used, or is incontinent

f) Is the patient able to feed himself without help?

1. Feeds self without assistance
2. Feeds self except for getting assistance in cutting meat or buttering bread
3. Receives assistance in feeding or is fed partly or completely by using tubes or intravenous fluids

20. Now I would like to ask you some questions about the services the patient receives, both here and anywhere else. Does he/she receive . . .

Step 1 Consult Service Definitions sheet and explain definitions to care-giver.

Step 2 Assist the care-giver in calculating monthly hours. Conceptualize in units of days or weeks, if helpful, then convert to a monthly figure. Enter the hours in the Response Log.

Step 3 For inpatient settings do <u>not</u> calculate hours for:

- General Nursing (3)
- Homemaking/Housekeeping (10)
- Case Management (12)
- Dietary Services (13)

In ambulatory settings (home health agencies, outpatient departments or clinics, health centers, mental health centers, day care, multi-service centers, congregate housing), do <u>not</u> calculate hours for:

- Case Management (12)
- Dietary Services (13)

Step 4 Note that for Item 14, Ancillary Services, Laboratory (d) and X-ray (e) are considered in units of <u>procedures per month</u>, not hours. Pharmacy (f) is entered in units of <u>prescriptions per month</u>.

Abt Associates Inc.
55 Wheeler Street
Cambridge, Massachusetts 02138

OMB No. 83-S-76003
Expiration Date: 12/31/77

PATIENT PROFILE SURVEY
RESPONSE LOG

Date of Interview ☐☐ ☐☐ 197☐

Interviewer Name _____

Title of Informant _____

Name of Setting _____

Address of Setting _____
Street

_____
City State

Patient ID ☐☐☐☐

1.	Patient's Age		____
2.	Patients's Sex	Male	( )
		Female	( )
3.	Marital Status	Single	( )
		Married	( )
		Widowed	( )
		Divorced	( )
		Separated	( )
4.	Race	White (not of Hispanic origin)	( )
		Black (not of Hispanic origin)	( )
		Hispanic	( )
		Asian or Pacific Islands	( )
		American Indian or Alaskan Native	( )
5.	Length of Stay	Less than 3 months	( )
		4 - 6 months	( )
		7 months - 1 year	( )
		13 months - 2 years	( )
		More than 2 years	( )

6. Residence (check only one)

Check only if patient has resided in an institution for more than two years. SKIP TO QUESTION 8.

- Private Residence ( )
- Commercial Rented Rooms ( )
- Domiciliary/Personal Care Facility ( )
- ICF ( )
- SNF ( )
- Chronic Disease/ Rehabilitation Hospital ( )
- Mental Hospital ( )
- Other (Specify) ( )

_____

7. Living Status

- Alone ( )
- With spouse ( )
- With children ( )
- Both spouse and children ( )
- With other family members ( )
- With non-family member(s) ( )
- With foster care ( )
- Other (Specify) ( )

_____

8. Insurance (check all that apply)

- Private insurance ( )
- Medicare ( )
- Medicaid ( )
- Workmen's Compensation ( )
- Union Benefit Programs ( )
- Fraternal Organizations ( )
- CHAMP-VA ( )
- Other (Specify) ( )

_____

- No insurance ( )

9. Primary Diagnosis _____

10. Co-existing conditions	Yes	No	Don't Know
a) Cancer	( )	( )	( )
b) Heart attack	( )	( )	( )
c) Stroke	( )	( )	( )
d) Kidney disease	( )	( )	( )
e) Diabetes	( )	( )	( )
f) Blindness	( )	( )	( )
g) Rheumatoid Arthritis	( )	( )	( )
h) Multiple Sclerosis	( )	( )	( )
i) Hypertension	( )	( )	( )
j) Mental illness	( )	( )	( )
k) Respiratory disease	( )	( )	( )
l) Other (Specify)			

_____

11. Mental Status

If checked, SKIP TO QUESTION 13

Comatose	( )
Oriented	( )
Partially disoriented	( )
Disoriented	( )

	Yes	No	Don't Know
12. Supervision	( )	( )	( )

	Yes	No	Don't Know/ Not Appropriate
13. Reading	( )	( )	( )

	Yes	No	Don't Know
14. Recent Events	( )	( )	( )

	Yes	No	Don't Know
15. Distant Events	( )	( )	( )

	Yes	No	Don't Know
16. Mood Shifts	( )	( )	( )

	Yes	No	Not Appropriate
17. Wandering	( )	( )	( )

18. Ambulation

Walks freely	( )
Walks with mechanical assistance (e.g., cane, crutches, walker, prostheses)	( )
Walks only with personal assistance	( )
Does not walk, but moves freely in wheelchair	( )
Confined to bed or chair	( )

19. Activities of Daily Living

a) Bathing	1 ( )	2 ( )	3 ( )
b) Dressing	1 ( )	2 ( )	3 ( )
c) Bathroom	1 ( )	2 ( )	3 ( )
d) Transfer	1 ( )	2 ( )	3 ( )
e) Continent	1 ( )	2 ( )	3 ( )
f) Feeding	1 ( )	2 ( )	3 ( )

20. Service	THIS SETTING Hours/Month	THIS SETTING Caregiver(s) by Job Title	OTHER Hours/Month	OTHER Caregiver(s) by Job Title
1. Medical Care	☐☐☐☐	_____	☐☐☐☐	_____
2. Mental Health Services	☐☐☐☐	_____	☐☐☐☐	_____
3. General Nursing Services	☐☐☐☐	_____	☐☐☐☐	_____
4. Specialized Nursing Services	☐☐☐☐	_____	☐☐☐☐	_____
5. Physical Therapy	☐☐☐☐	_____	☐☐☐☐	_____
6. Occupational Therapy	☐☐☐☐	_____	☐☐☐☐	_____
7. Recreational Activities	☐☐☐☐	_____	☐☐☐☐	_____
8. Speech and Hearing Therapy	☐☐☐☐	_____	☐☐☐☐	_____
9. Personal Care Services	☐☐☐☐	_____	☐☐☐☐	_____
10. Homemaking/Housekeeping Services	☐☐☐☐	_____	☐☐☐☐	_____
11. Special Education	☐☐☐☐	_____	☐☐☐☐	_____
12. Case Management	☐☐☐☐	_____	☐☐☐☐	_____
13. Dietary Services	☐☐☐☐	_____	☐☐☐☐	_____
14. Ancillary Health Services				
a. Podiatry	☐☐☐☐	_____	☐☐☐☐	_____
b. Dental Care	☐☐☐☐	_____	☐☐☐☐	_____
c. Eye Care	☐☐☐☐	_____	☐☐☐☐	_____
d. Laboratory	☐☐	_____	Indicate number of procedures or prescriptions received in last month only	
e. X-ray	☐☐	_____		
f. Pharmacy	☐☐	_____		

APPENDIX B

CALCULATION OF DEPRECIATION AND INTEREST

Calculation of Depreciation and Interest

Depreciation and interest are influenced most by construction costs. Construction costs are in turn dependent upon the year of construction, location, basic design features, specialized features, types of construction, and size. By making use of data from the "Dodge Building Cost Calculator and Valuation Guide," estimates of construction costs can be made. The following directions provide the necessary steps.

1. Using the Dodge book Medical/Professional section, select the building type that most accurately reflects the care setting being studied (see Form B-2). Enter it in Line 1 of Form B-1. Also enter the year the facility was built.

2. Enter the actual square footage of the institution on Line 2. If actual square footage is not known, use an estimate from the administration or maintenance department.

3. In Form B-2, from the Dodge Calculator Medical/Professional section, the cost per square foot of each building type is given. Select the cost per square footage corresponding to the building type shown on Line 1. Enter the cost per square foot on Line 3.

4. Multiply Line 2 times Line 3 to get a gross estimate of cost per square foot.

5. The Dodge Calculator also includes a section devoted to adjusting cost for differences in location. Form B-3 includes the tables for locations all over the U.S. Each city has an index which when multiplied by an estimated construction cost will adjust for the variation in construction costs which result from regional differences. On Line 5 enter the index from Form B-3 which corresponds to the location of the institution.

6. Multiply Line 5 times Line 4 to get cost per square foot adjusted for location.

7. Building cost estimates must also be adjusted for the year of construction. This is important because the construction costs have been rising at such a rapid rate that the variation between years can be quite large. The adjustment for time is a two-step process when a building is not new. To estimate the cost of a building built at some point in the past, use the Table of Hisotrical Indices (Form B-4). First, select the index for the year the facility was built and enter this on Line 7. Second, on Line 8 enter the index shown for the current year. The index for the year of construction divided by the current index is the ratio used to adjust the date of construction.

8. Perform the calculation: Line 7 divided by Line 8 times Line 6. The result is the estimated construction cost.

If you desire to use more recent adjusters, the Dodge Guide can be found in most libraries.

Form B-1

WORKSHEET FOR ESTIMATED CONSTRUCTION COSTS

1. Building type_____ Year_____

2. Square Footage....._____

3. Cost per square foot....._____

4. Gross estimate of cost per square foot....._____
   (Line 2 x Line 3)

5. Multiplier to adjust for location*....._____

6. Cost per square foot adjusted for location....._____
   (Line 5 x Line 4)

7. Index for the year the facility was built....._____
   (If facility is less than or equal to 2 years old, ignore Line 7)

8. Index for the current year....._____

9. Estimated construction costs ....._____
   $\left(\left(\frac{\text{Line 7}}{\text{Line 8}}\right) \times \text{Line 6}\right)$

* If the city where the institution is located does not appear on any of the tables in Form B-3, then use the city which is nearest.

Having estimated the construction costs the following are the procedures for calculated depreciation and interest:

- Depreciation is equal to 1/40th of the construction cost estimate. This is called a straight-line basis and is in keeping with conservative accounting techniques.

- Interest. To calculate the interest paid in any given year on a mortgage four factors must be known:
  - the original principle of the mortgage
  - the interest rate
  - the original term of the mortgage
  - the year of the mortgage in question

  Knowing these facts, the charts such as the ones shown on Form B-4 can be used. Here the interest is expressed in dollars of interest per thousand dollars of mortgage principle. An example is a 15-year mortgage, at 8% would accrue $4,100 of interest charges in the tenth year.

Include depreciation and interest on Form E.

AVERAGE CONSTRUCTION COSTS
(per square foot)

Square Feet (1000s)	Hospitals - General		Hospital-Community	Convalescent/Nursing Home	Medical/Dental Office Bldg.
	Concrete Frame	Steel and Con. Frame			
< 10				$24.22	$21.85
10				22.56	
20	$34.52		$35.11	21.32	
30	35.75		37.24	20.56	
40	36.87		38.42	19.82	
50	37.73		39.89		
80	38.90	$39.25	42.08		
100	39.26	41.38			
150		46.26			
200		49.94			
250		51.85			
300		53.10			

All construction includes basements.

Source: Dodge Building Cost Calculator and Valuation Guide (October - December 1975)

COST MULTIPLIERS

Location	Average Multiplier
Montgomery, Alabama	1.068
Tucson, Arizona	1.569
Los Angeles, California	1.594
Denver, Colorado	1.489
Hartford, Connecticut	1.493
New Haven, Connecticut	1.706
Washington, D.C.	1.573
Atlanta, Georgia	1.265
Chicago, Illinois	1.514
Louisville, Kentucky	1.443
Portland, Maine	1.370
Boston, Massachusetts	1.613
Detroit, Michigan	1.784
Minneapolis, Minnesota	1.571
Jackson, Mississippi	1.217
St. Louis, Missouri	1.629
Manchester, New Hampshire	1.482
New York, New York	1.701
Greenboro, North Carolina	1.221
Cleveland, Ohio	1.613
Tulsa, Oklahoma	1.392
Philadelphia, Pennsylvania	1.668
Providence, Rhode Island	1.655
Memphis, Tennessee	1.503
Dallas, Texas	1.391
Burlington, Vermont	1.465
Richmond, Virginia	1.295
Seattle, Washington	1.524
Milwaukee, Wisconsin	1.652
Honolulu, Hawaii	1.574

To be used with Dodge Cost Calculators. Generally accurate for 25-mile radius of city, although roughly accurate for entire state if no other multiplier referenced for that state. (Book lists multipliers for hundreds of cities in U.S. and Canada.)

HISTORICAL INDICES

(General Index)

Location	1960	1965	Sept. 1970	Sept. 1973	Sept. 1975
Baltimore, Maryland	277.6	284.7	347.8	474.5	579.6
Boston, Massachusetts	232.8	256.3	327.6	436,8	511.7
Burlington, Vermont	246.6	267.4	342,2	425.2	500.0
Dallas, Texas	239.9	259.5	326.3	435.4	498.1
Denver, Colorado	257.9	292.7	367.1	460.0	552.1
Jackson, Mississippi	140.8	142.5	181,7	224.5	262.3
Los Angeles, California	263.6	295.8	360.7	503.2	593.6
New Haven, Connecticut	257.3	277.6	340.0	459.4	554.4
New York, New York	265.4	296.0	350.5	484.3	532.0
Portland, Maine	247.5	258.7	320.6	394.7	488.5
Richmond, Virginia	225.1	242,8	294.2	374.5	489.8
Washington, D.C.	236.3	262.5	327.4	433.5	482.7
Worcester, Massachusetts	112.7	129.4	165.4	211.9	257.9

This list is a representative sample only. Similar indices exist for many more cities. To be used to compare construction costs for various years for a single city. These are not comparable with the city cost multipliers.

APPENDIX C

GLOSSARY

GLOSSARY

Allocation	To distribute or parcel out costs or time among a group.
Amortization	The periodic write-off of intangible assets, including organization expenses and good will.
Bad Debts	Expense incurred from the write-off of uncollectible accounts receivable.
Business Taxes	Expenses for state and local franchise tax, personal property, state income taxes and other local taxes, excluding property taxes and federal income taxes.
Caregiver	Any person involved in the delivery of care to patients.
Contract/Purchased Services	Services purchased from outsiders including consultant and other fees (a legal contract need not be formed to be included here).
Contributions	Fair market value of gifts whether received in cash, commodities or services which would not have been purchased by the facility and therefore have not been included under Donated Services and Donated Goods.
Conventions, Conferences, Etc.	The cost of attending professional meetings, seminars, institutes, conferences and conventions including lodging, travel, meals and registration fees.
Depreciation-Building, Machinery & Equipment	Depreciation of all property, plant, and equipment assets (including leasehold improvements), except land, automobile and furniture.
Depreciation-Furniture and Fixtures	Depreciation expense of all furniture, fixtures prorated over their expected life.
Depreciation-Motor Vehicles	Depreciation expense for motor vehicles prorated over their expected life.
Donated Goods	Fair market value of commodities such as food, property, or building and equipment donated annually that would otherwise have been purchased by the facility.
Donated Services	Fair market value of services donated annually by members of religious orders, owner/operator, relatives of owner/operator, or volunteers that otherwise would have been purchased by the facility.

Dues and Subscriptions	Dues for professional organization and subscriptions to journals and periodicals.
Employee Benefits	Benefits required by law, offered by contract or policy, and other special benefits. A representative listing of some benefits are social security, life insurance, health insurance, workmen's compensation insurance, disability insurance, retirement plan contributions, state unemployment compensation taxes.
Equipment Repair and Maintenance	Expense required to repair and maintain the equipment used by this department.
Full Time Equivalents	Sum of actual hours for which providers are paid divided by the product of the number of employees times the number of hours in a standard work week.
Inservice Education	Cost of educational courses or inservice training of employees.
Insurance on Property and Equipment	Expenses for insurance (fire, comprehensive, etc.) on property and equipment.
Interest (Property/Equipment Related)	Interest paid and write-off of other financing. Interest on auto loans and working capital loans would be included here.
Postage, Telephone, Etc.	Charges for all communication services. This includes rental fees on general internal communication and paging systems.
Public Relations	Advertising brochures, and all promotional and public relations expenses.
Provider	Any person involved in the delivery of care to patients.
Real Estate Taxes	Real estate taxes paid or due on facility building and grounds.
Rent	Charges for rental or lease of building, property or equipment.
Salaries and Wages	Gross salaries and wages paid in cash to employees.
Straight Line Method	Depreciation computed by prorating the cost of a fixed asset equally over the asset's life.
Supplies	Material which is not depreciated and under normal operating conditions will be consumed within one year (food included).
Vehicle Maintenance	Cost of maintaining and repairing vehicles owned by the facility. Amounts paid for leasing and rental of vehicles should be included. The cost of operating automobiles, ambulances and other motor vehicles includes registration fees, gasoline, oil, tires, lubrication and all other repairs and maintenance.

APPENDIX D

EXAMPLE

FORM A

ADMINISTRATOR PROTOCOL

Name of the Institution Shady Grove Home for the Aged

Site Characteristics

1. Type of Control

   a. Voluntary Non-Profit

      Church ☑ Other ☐

   b. Proprietary

      Individual ☐ Partnership ☐

      Corporation ☐ Other ☐

   c. Government

      Federal ☐ State ☐

      County ☐ City ☐ Other ☐

2. How long has this organization been functioning? 80 years

3. a. If the facility has inpatients:

      Number of beds 140

      Number of admissions _____

      Number of patient days 51,100

      Average Occupancy 100%

   b. If the facility has outpatients:

      Caseload _____

      Number of visits (or encounters) _____

4. What is the catchment area served? Bigtown metropolitan area

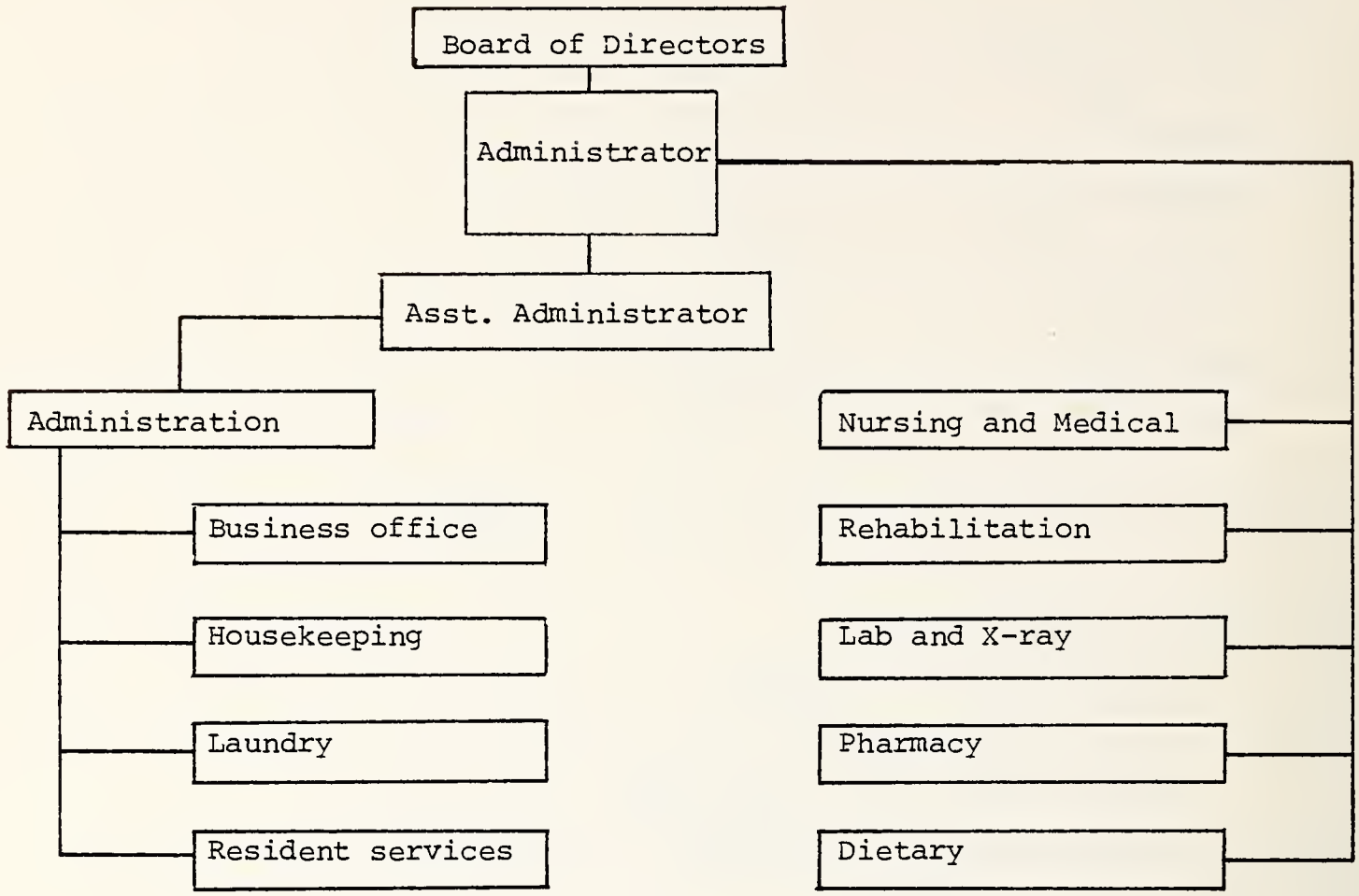
5. How old are the buildings and facilities? (Ranges Acceptable) 5 to 80 years

6. On a blank page, ask the administrator to draw an organizational chart (or, if one is available, ask for a copy).

7. Explain the data needs using Exhibit 2.1 Ask the administrator if the Comptroller or the financial person can provide information on departmental staffing. If not, ask who can.

8. Discuss the patient sample selection process and determine which staff will provide patient data.

SHADY GROVE HOME



DEPARTMENT WORKLIST FORM B

Setting Shady Grove, p. 1

Name of Department	Department Head	Provider Types	Number of FTEs or actual hours	Average Salary	Payment Mode (salary, consultant, volunteer)	Average Overtime Hours
nursing & medical svcs.	Moran	RN	13,501 hrs*	5.42/hr	salary	—
		LGPN (staff)	4,791 hrs*	4.80/hr	"	—
		LGPN (agency)	3,761 hrs*	7.56/hr	"	—
		Aides & orderlies	58,167 hrs*	3.23/hr	"	—
		ophthalmologist	42 hrs/yr	1,919/yr	"	—
		Physician + ENT	778 hrs/yr	21,730/yr	"	—
		Dentist	28 hrs/yr	1,439/yr	"	—
		Podiatrist	51 hrs/yr	2,229/yr	"	—
rehabilitation	Gluck	Physical therapist	1.5 hrs/wk = 78 hrs/yr	1,756/yr	"	—
		Occupational therapist	.25 FTE	3,474/yr	"	—
resident services	Voltan	Director	1.0 FTE	11,924/yr	"	—
		volunteers	1040 hrs	0	volunteer	—
business office	Werbucks				salary	—
housekeeping	Nieter	staff avg.	24 FTE	2.60/hr	"	—
laundry	Laban	staff avg.	4.6 FTE	2.99/hr	"	—
lab + x-ray	Mehrlen				"	—

* calculated from salary

Setting Shady Grove p. 2

DEPARTMENT WORKLIST

FORM B

Name of Department	Department Head	Provider Types	Number of FTEs or actual hours	Average Salary	Payment Mode (salary, consultant, volunteer)	Average Overtime Hours
pharmacy	Nicholson				Salary	—
administration	T.B. Stone				"	—
dietary	Eskaff	staff average	20.0	4.00/hr	"	—

DEPARTMENT EXCEPTIONS

DEPARTMENT NAME	USUAL TASKS	EXAMPLE OF UNUSUAL TASKS
Security	Guarding the facility, locking doors, unlocking doors, monitoring visitors coming and going, etc.	Transporting patients, maintenance work, other "non guard duty" activities
Maintenance	Repair work, heavy cleaning, preventive maintenance of equipment, painting, loading and unloading supplies, etc.	Light cleaning or housekeeping tasks, food service work, laundry work
Food Service	Preparation of food, serving, cleaning up, inventory, menu development, ordering of supplies, etc.	Housekeeping activities, laundry activities
Housekeeping	Light cleaning, such as mopping, polishing furniture, cleaning bathroom fixtures, etc.	Maintenance activities
Laundry	Collecting, washing, and drying linens, and bed clothes, etc.	Housekeeping activities

Security — Unusual Tasks

Number (FTEs)	Task
none	

Maintenance — Unusual Tasks

Number (FTEs)	Task
none	

Food Service — Unusual Tasks

Number (FTEs)	Task
none	

Housekeeping — Unusual Tasks

Number (FTEs)	Task
none	

Laundry — Unusual Tasks

Number (FTEs)	Task
none	

CONTROLLER'S QUESTIONNAIRE

1) How many holidays did employees receive? 8

2) How many days of vacation did an average employee take? 12

3) How many sick days did the average employee take during the period? DK
(If the answer to this question is not known, ask Question 4.)

4) How many sick days were allowed? 6

5) How many hours per week is considered fulltime? 40 - 5 days

6) Excluding mealtime and coffee breaks, how many hours does an employee normally work per day? 7.167 (8 hrs - 30 min. lunch - 2 x 10 min break = 7 hrs. 10 min = 7.167)

7) What is the policy for compensating employees for overtime? NA

8) What was the value of donated services last year? none What were they? _____

9) What was the value of goods donated last year? none What were they? _____

10) Does the care-setting have any of the following on the premises? *(yes or no)*

laboratory no

radiology no

pharmacy yes

Setting Shady Grove COST–FINDING WORKSHEET FORM E

Administration

EXPENDITURES	LAST FISCAL YEAR	
	ACTUAL	IMPUTED
A) GENERAL ADMINISTRATIVE EXPENSES		
1. Salaries and wages (for administration [1])	90452	
2. Employee benefits (applicable item 1 only)	9941	
3. Donated goods		
4. Contract/purchased services [2]	41268	
5. Contributions (to charity etc.)		
6. Supplies	8172	
7. Amortization		
8. Equipment repair and maintenance		
9. Depreciation–furniture & fixtures		
10. Non-building related interest	28977	
11. Non-building related insurance	38622	
12. Business taxes		
13. Bad debts		
14. In-service education		
15. ~~Public relations~~ Medical records	6973	
16. Dues and subscriptions + licenses	2189	
17. Conventions, conferences, etc.	2270	
18. Security department expenses		
19. Telephone	6001	
20. Other	7262	
SUBTOTAL	242,127	
B) BUILDING AND RELATED EXPENSES		
1. Depreciation–building →	119,463	
2. Depreciation–machinery and equipment ↗		
3. Rent		
4. Interest		
5. Insurance		
6. Real estate taxes		11764
7. Maintenance department expenses	273,363	
8. Other building costs		
SUBTOTAL	392,826	11,764
C) MOTOR VEHICLE EXPENSES		
1. Motor vehicle depreciation		
2. Vehicle maintenance		
3. Salaries & Wages (drivers)		
SUBTOTAL	—	—

[1] Includes personnel, billing, admitting, and general administrative salaries and wages

[2] Includes accountants, legal services, pharmacy consultants, medical records consultants, and medical review consultants

NA

Summary of Expenditures
for Employee Benefits

EXPENDITURES	LAST COMPLETE FISCAL YEAR
FICA	
Hospital and Medical Insurance	
State Unemployment	
Workman's Compensation	
Federal Unemployment	
Bereavement	
Training	
Uniforms	
Vacation, annual leave*	
Sick*	
Holiday*	
TOTAL	

*only if maintained as separate line item.

Setting Shady Grove

Department Nursing and medical services

INFORMANT D. Warbucks (name)

Business manager (title)

EXPENDITURES	YEAR TOTAL ACTUAL	YEAR TOTAL IMPUTED	PROVIDER: RN	LGPN	Aides + Orderlies	Ophthalmologist	Physician + ENT	Dentist
			HOURS: 10,850 *	7,207 *	46,745 *	42 *	778 *	28 *
			FTEs					
Salaries and Wages	284,056		73,176	22,999	187,881			
Fringe Benefits	20,916							
Contract Purchased Service	55,748			28,431		1,919	21,730	1,439
Donated Services								
Donated Goods								
Supplies + misc.	31,816							
Other								
department admin	8729							
non staff fees	506							
hospitalization	175							
ambulance fees	579							
TOTAL	402,525							

* calculated on Form R

COST FINDING WORKSHEET

FORM G

Setting Shady Grove

Department Nursing and medical services, page 2

INFORMANT D. Warbucks
name

Business manager
title

EXPENDITURES	YEAR TOTAL ACTUAL	YEAR TOTAL IMPUTED	PROVIDER					
			Podiatrist					
			HOURS					
			51*					
			FTEs					
Salaries and Wages								
Fringe Benefits								
Contract Purchased Service			2,229					
Donated Services								
Donated Goods								
Supplies								
Other								
TOTAL								

see previous page

* Location: Form A

Setting Shady Grove *

Department pharmacy

INFORMANT Warbucks (name)

bus mgr (title)

EXPENDITURES	YEAR TOTAL ACTUAL	YEAR TOTAL IMPUTED	PROVIDER					
			HOURS					
			FTEs					
Salaries and Wages								
Fringe Benefits								
Contract Purchased Service								
Donated Services								
Donated Goods								
Supplies								
Other								
TOTAL	30,612							

* Since this department will later be excluded, there is no reason to split out the various cost elements.

COST FINDING WORKSHEET

FORM G

Setting Shady Grove

Department Lab & X ray *

INFORMANT Warbucks (name)

Bus. mgr. (title)

EXPENDITURES	YEAR TOTAL ACTUAL	YEAR TOTAL IMPUTED	PROVIDER / HOURS / FTEs					
Salaries and Wages								
Fringe Benefits								
Contract Purchased Service								
Donated Services								
Donated Goods								
Supplies								
Other								
TOTAL	5,012							

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* Refer to [illegible]

Setting Shady Grove

Department Housekeeping

INFORMANT Warbucks (name)

Bus. mgr (title)

EXPENDITURES	YEAR TOTAL ACTUAL	YEAR TOTAL IMPUTED	PROVIDER HOURS FTEs						
			staff						
			5065*						
Salaries and Wages									
Fringe Benefits									
Contract Purchased Service	130,428		130428						
Donated Services									
Donated Goods									
Supplies									
Other									
→ linens, curtains	3,197								
exterminating	93								
TOTAL	133,718								

* calculated on form R

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COST FINDING WORKSHEET

FORM G

Setting Shady Grove

Department Laundry

INFORMANT Warbucks
name
bus mgr
title

EXPENDITURES	YEAR TOTAL ACTUAL	YEAR TOTAL IMPUTED	PROVIDER						
			HOURS	staff 9605 *					
			FTEs						
Salaries and Wages									
Fringe Benefits									
Contract Purchased Service	28,729			28,729					
Donated Services									
Donated Goods									
Supplies									
Other									
repairs	1,257								
TOTAL	29,986								

* Incl. Tokens Sold

Setting Shady Grove

Department dietary (excl. food)

INFORMANT Warbucks (name)

Bus. mgr. (title)

EXPENDITURES	YEAR TOTAL ACTUAL	YEAR TOTAL IMPUTED	PROVIDER						
			staff						
HOURS			33560*						
FTEs			20						
Salaries and Wages	167,048		167,048						
Fringe Benefits	25,915								
Contract Purchased Service									
Donated Services									
Donated Goods									
Supplies									
Other									
food service mgmt	46,741								
repairs to equipment	3,114								
TOTAL	242,818								

* calculated on form R

COST FINDING WORKSHEET

FORM G

Setting Shady Grove

Department rehab.

INFORMANT Warbucks (name)

bus mgr (title)

EXPENDITURES	YEAR TOTAL ACTUAL	YEAR TOTAL IMPUTED	PROVIDER: PT	PROVIDER: OT				
HOURS			78*	420*				
FTEs								
Salaries and Wages	3,474			3,474				
Fringe Benefits	369							
Contract Purchased Service	1,756		1,756					
Donated Services								
Donated Goods								
Supplies								
Other								
TOTAL	5,599							

* calculated from figures

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COST FINDING WORKSHEET — FORM G

Setting Shady Grove

Department Resident services

INFORMANT Warbucks (name)

Bus. mgr (title)

EXPENDITURES	YEAR TOTAL ACTUAL	YEAR TOTAL IMPUTED	PROVIDER: Director, Res. Svc.	Volunteers				
			HOURS	1040				
			FTEs 1.0					
Salaries and Wages	11,924		11,924					
Fringe Benefits	1,342							
Contract Purchased Service								
Donated Services		2,506		2,506 *				
Donated Goods								
Supplies								
Other								
TOTAL	13,266	2,506						

* calculated on form I

Setting Shady Grove

FORM I

COMPUTING COSTS FOR VOLUNTEERS AND CONSULTANTS

	1	2	3	4	5
	Provider	Average Salary Base (Response from Source)	Hours Worked Per Week in the Institution	FTE Represented by Column 3	Annual Imputed Cost to Institution
				Col. 3 ÷ 40	Col. 4 x Col. 2
1	res. soc. volunteers	2.40/hr = $5011	20	.5	2506
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

part ___ E A CA N W SH MJ

	SERVICES	PERCENTAGE OF TIME SPENT PROVIDING EACH SERVICE FOR EACH CAREGIVER TYPE											
		RN				LGPN				Aides + Ords			
		A Dept. Head	B Care-Giver	C Average	D %	A Dept. Head	B Care-Giver	C Average	D %	A Dept. Head	B Care-Giver	C Average	D %
DIRECT PATIENT CARE SERVICES	Medical Care												
	Mental Health												
	Emotional Support												
	Nursing Care – General	.40	0	.20	.22	1.00	1.00	1.00	1.00				
	Nursing Care – Specialized	.40	1.00	.70	.78								
	Physical Therapy												
	Occupational Therapy												
	Speech and Hearing Therapy												
	Recreational Activities												
	Personal Care									1.00	1.00	1.00	1.00
	Homemaking/Housekeeping												
	Special Education												
	Vocational Education												
	Case Management												
	Dietary Services												
	Podiatry												
	Dental Care												
	Optometry												
	Inhalation Therapy												
	Patient Transportation												
	Non-specific Patient Supervision												
	Other												
	Subtotal	.80	1.00	.90	100%	1.00	1.00	1.00	100%	1.00	1.00	1.00	100%
OTHER	Supervision and Inservice Training	.20	0	.10									
	Administrative												
	Total	100%	100%	100%		100%	100%	100%		100%	100%	100%	

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Department nursing + medical — TIME ALLOCATION WORKSHEET — FORM J

	SERVICES	PERCENTAGE OF TIME SPENT PROVIDING EACH SERVICE FOR EACH CAREGIVER TYPE											
		Ophthalmologist				Physician + ENT				Dentist			
		A Dept. Head	B Care-Giver	C Average	D %	A Dept. Head	B Care-Giver	C Average	D %	A Dept. Head	B Care-Giver	C Average	D %
DIRECT PATIENT CARE SERVICES	Medical Care	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
	Mental Health												
	Emotional Support												
	Nursing Care – General												
	Nursing Care – Specialized												
	Physical Therapy												
	Occupational Therapy												
	Speech and Hearing Therapy												
	Recreational Activities												
	Personal Care												
	Homemaking/Housekeeping												
	Special Education												
	Vocational Education												
	Case Management												
	Dietary Services												
	Podiatry												
	Dental Care									1.00	1.00	1.00	1.00
	Optometry												
	Inhalation Therapy												
	Patient Transportation												
	Non-specific Patient Supervision												
	Other												
	Subtotal	1.00	1.00	1.00	100%	1.00	1.00	1.00	100%	1.00	1.00	1.00	100%
OTHER	Supervision and Inservice Training												
	Administrative												
	To[redacted]			1[redacted]		100	100	100%		[redacted]0%	[redacted]%	[redacted]%	

Part [redacted] [redacted] [redacted]

Department Resident service

TIME ALLOCATION WORKSHEET

FORM J

	SERVICES	PERCENTAGE OF TIME SPENT PROVIDING EACH SERVICE FOR EACH CAREGIVER TYPE											
		Director. resident service				volunteers							
		A Dept. Head	B Care-Giver	C Average	D %	A Dept. Head	B Care-Giver	C Average	D %	A Dept. Head	B Care-Giver	C Average	D %
DIRECT PATIENT CARE SERVICES	Medical Care												
	Mental Health												
	Emotional Support		.10	.10	.17	.10	.20	.15	.16				
	Nursing Care – General												
	Nursing Care – Specialized												
	Physical Therapy												
	Occupational Therapy												
	Speech and Hearing Therapy												
	Recreational Activities		.20	.20	.33	.60	.50	.55	.57				
	Personal Care					.15	.05	.10	.11				
	Homemaking/Housekeeping												
	Special Education												
	Vocational Education												
	Case Management		.30	.30	.50								
	Dietary Services												
	Podiatry												
	Dental Care												
	Optometry												
	Inhalation Therapy												
	Patient Transportation												
	Non-specific Patient Supervision					.15	.15	.15	.16				
	Other												
	Subtotal		.60	.60	100%	1.00	.90	.95	100%				100%
OTHER	Supervision and Inservice Training												
	Administrative		.40	.40		0	.10	.05					
	T[redacted]	[redacted]%	[redacted]	[redacted]	[redacted]	1[redacted]	10[redacted]	100[redacted]	[redacted]	[redacted]00%	[redacted]0%	[redacted]0%	[redacted]

FORM K

PATIENT PROFILING WORKSHEET

Setting: Shady Grove

STAGE	I	+	II	+	III	=	IV
Patient Number	Functional Status Category (from Worksheet I)		Risk Factor Category (from Stage II, Step b)		Mental Disorder Present or Absent (from Stage III, Step a)		Profile Category
1	independent		A		abs		1
2	independent		A		abs.		1
3	independent		A		pres		2
4	"		D		pres		8
5	"		C		p		6
6	"		C		a		5
7	"		B		p		4
8	"		B		a		3
9	"		A		a		1
10	"		D		p		8
11	"		D		p		8
12	"		A		p		2
13	"		A		p		2
14	"		B		a		3
15	"		B		p		4
16	"		B		p		4
17	"		D		a		7
18	"		C		p		6
19	"		C		p		6
20	"		C		a		5

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FORM K

PATIENT PROFILING WORKSHEET

Setting: Shady Grove

STAGE I + II + III = IV

Patient Number	Functional Status Category (from Worksheet I)	Risk Factor Category (from Stage II, Step b)	Mental Disorder Present or Absent (from Stage III, Step a)	Profile Category
21	independent	C	a	5
22	"	B	p	4
23	"	B	p	4
24	"	D	a	7
25	"	D	a	7
26	"	D	a	7
27	"	D	p	8
28	"	A	a	1
29	"	A	a	1
30	"	A	p	2
31	"	A	p	2
32	"	A	p	2
33	"	B	a	3
34	"	B	p	4
35	"	C	p	6
36	"	D	a	7
37	"	C	a	5
38	"	B	a	3
39	"	B	a	3
40	"	A	a	1

FORM L–1

INTENSITY OF SERVICES PROVIDED WITHIN SETTINGS

Setting: Shady Grove

Type of Service medical care

Patient Profile	Number of Hours of Services Provided/Month															Total	Average
1	.08	0	.08	.98	.06	.06										1.26	.21
2	.5	0	0	0	.1	0										.6	.1
3	.5	0	.5	.6	.4											2.0	.4
4	.15	0	.05	0	.2	.2										.6	.1
5	.4	0	.12	0												.3	.13
6	1.0	0	0	0												1.0	.25
7	.5	1.0	1.0	.5	.9											3.9	.78
8	2	1	4	1												8	2
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

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FORM L–1

INTENSITY OF SERVICES PROVIDED WITHIN SETTINGS

Setting: Shady Grove

Type of Service emotional support

Patient Profile	Number of Hours of Services Provided/Month															Total	Average
1	.15	0	0	.03	0	0										.18	.03
2	.1	.2	0	0	.3	0										.6	.1
3	.3	0	0	0	0											.3	.06
4	.1	.1	.1	0	.2	.1										.6	.1
5	0	.2	0	0												.2	.05
6	0	0	0	0												0	0
7	0	.2	0	0	0											.2	.04
8	0	.4	0	0												.4	.1
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

FORM L–1

INTENSITY OF SERVICES PROVIDED WITHIN SETTINGS

Setting: Shady Grove

Type of Service nursing - specialized

Patient Profile	Number of Hours of Services Provided/Month															Total	Average
1	.7	.3	.5	.5	.64	0										2.64	.44
2	0	1.0	0	0	.5	0										1.5	.25
3	3.0	2.0	6.0	4.0	3.0	2.5										20.5	4.1
4	.6	.9	0	2.0	.4	.6										4.5	.75
5	3.0	2.0	1.0	.4												6.4	1.6
6	0	2.0	0	0												2.0	.5
7	2.0	5.0	6.9	3.0	1.0											17.9	3.58
8	2.0	6.5	.5	7.0												16.0	4.0
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

FORM L–1

INTENSITY OF SERVICES PROVIDED WITHIN SETTINGS

Setting: Shady Grove

Type of Service recreational activities

Patient Profile	Number of Hours of Services Provided/Month															Total	Average
1	10	15	8	0	0	.6										33.6	5.6
2	3	3	8	12	7	9										42.0	7
3	6	6	4	5	5											26.0	5.2
4	4	3	2	2	5	2										18.0	3
5	10	4	5	5												24.0	6
6	7	3	11	3												24.0	6
7	.65	10	9	7	7											33.65	6.73
8	0	0	0	0												0	0
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

FORM L–1

INTENSITY OF SERVICES PROVIDED WITHIN SETTINGS

Setting: Shady Grove

Type of Service personal care

Patient Profile	Number of Hours of Services Provided/Month															Total	Average
1	0	0	0	0	0	0										0	0
2	0	0	0	0	0	0										0	0
3	2	2	3	1	0											8	1.6
4	0	5	0	2	0	3.2										10.2	1.7
5	3	3	0	2												8	2.0
6	1	0	2	2.2												5.2	1.3
7	1	2	4	4	4											15	3.0
8	12	1	80	19												112	28.0
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

FORM L–1

INTENSITY OF SERVICES PROVIDED WITHIN SETTINGS

Setting: Shady Grove

Type of Service podiatry

Patient Profile	Number of Hours of Services Provided/Month															Total	Average
1	.07	.06	.01	.20	.07	.07										.48	.08
2	0	0	0	0	0	0										0	0
3	0	0	.6	0	0											.6	.12
4	0	0	0	0	0	0										0	0
5	0	0	0	1.0												1.0	.25
6	.1	0	.5	.4												1.0	.25
7	0	0	0	0	0											0	0
8	.3	.3	.4	0												1.0	.25
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

FORM L–1

INTENSITY OF SERVICES PROVIDED WITHIN SETTINGS

Setting: Shady Grove

Type of Service Dental care

Patient Profile	Number of Hours of Services Provided/Month														Total	Average
1	.04	.03	.03	.06	.05	.75									.96	.16
2	0	0	0	0	0	0									0	0
3	0	0	0	0	0										0	0
4	.03	.03	.03	.03	.03	.03									.18	.03
5	0	.08	.08	0											.16	.04
6	0	0	0	0											0	0
7	.03	.06	.10	.03	.08										.30	.06
8	.03	.03	.04	.30											.4	.1
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

INTENSITY OF SERVICES PROVIDED BY "OTHER CAREGIVERS"

FORM L–2

Setting Name: Shady Grove.

Setting Type: inpatient - home for aged.

SERVICES	PATIENT PROFILE 1	1	6 people in profile 1	2	6 people in profile 2	4	6 people in profile 4	8	4 people in profile 8
medical care	1 hr @ 42.66		(7.11)						
mental health		1 hr @ 40.34	(6.72)						
physical therapy				½ hr @ 20.00	(3.33)				
dental care						½ hr @ 17.28	(2.88)		
optometry								1 visit @ 30.00	(7.50)

KEY: Source of Care Received

a. private physician $42.66
b. psychologist $40.34
c. private physical therapist $20.00
d. private dentist $34.56
e. eye clinic $30
f. _____

FORM M

AVERAGE SERVICE HOURS BY PATIENT PROFILE TYPE

Setting Shady Grove

SERVICES \ PROFILES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Medical Care	.21	.1	.4	.1	.13	.25	.78	2																
Mental Health																								
Emotional Support	.03	.1	.06	.1	.05	0	.04	.1																
Nursing - General *	5.57	5.57	5.57	5.57	5.57	5.57	5.57	5.57																
Nursing - Specialized Services	.44	.25	4.1	.75	1.60	.5	3.58	4																
Physical Therapy																								
Occupational Therapy																								
Speech & Hearing Therapy	-																							
Recreational Activities	5.6	7	5.2	3	6	6	6.73	0																
Case Management *	.3	.3	.3	.3	.3	.3	.3	.3																
Personal Care	0	0	1.6	1.7	2.0	1.3	3	28																
Homemaking/Housekeeping *	55.6	55.6	55.6	55.6	55.6	55.6	55.6	55.6																
Special Education																								
Vocational Education																								
Dietary Services																								
Podiatry	.08	0	.12	0	.25	.25	0	.25																
Dental Care	.016	0	0	.03	.04	0	.06	.1																
Optometry																								
Inhalation Therapy																								
Patient Transportation																								
Non-Specific Patient Supervision *	.09	.09	.09	.09	.09	.09	.09	.09																
Other																								

*calculated on form V

Setting Shady Grove DETERMINATION OF CONSULTANT COSTS FORM N

A	B	C	D	E	F	G	H
Consultant Provider Type	Actual Cost	Imputed Cost	Total	Hours Worked Per Year (Hrs/wk X 52)	Cost Per Hour Actual (B ÷ E)	Cost Per Hour Imputed (C ÷ E)	Cost Per Hour Total (F + G)
none							

Setting Shady Grove

FORM O

DETERMINATION OF BUILDING COSTS

	ACTUAL	IMPUTED	TOTAL
Depreciation-Building →	119,463	—	119,463
Depreciation-Machinery and Equipment			
Rent			
Interest			
Insurance			
Utilities (heat, light, water)			
Plant Operation and Maintenance	273,363		273,363
Real Estate Taxes (subtract)	( )		( )
Total (per year)	392,826		392,826
Cost per Month (Total ÷ 12)	32,736		32,736
Cost per patient per month (Monthly Cost ÷ by average census) (140)	$ 233.83		$ 233.83

Setting Shady Grove

FORM P

DETERMINATION OF COST OF FOOD

	ACTUAL	IMPUTED	TOTAL
Raw Food			
Kitchen Supplies			
Total (per year)	118,615	—	118,615
Cost per month (Divide by 12)	9,885	—	9,885
Cost per person per month (monthly cost divided by average census) (140)	70.61	—	70.61

FORM Q

ALLOCATION OF OVERHEAD DEPARTMENT COSTS

Setting: Shady Grove

A	B	C	D	E	F	G	H	I	J	K
DEPARTMENT NAMES	DEPARTMENT COSTS			FRACTION OF DIRECT COSTS	OVERHEAD DEPARTMENT COSTS ALLOCATED TO DIRECT SERVICE DEPARTMENTS			LOADED DEPARTMENT COSTS		
	ACTUAL	IMPUTED	TOTAL		ACTUAL	IMPUTED	TOTAL	DIRECT SERVICE ACTUAL	DIRECT IMPUTED	TOTAL
OVERHEAD DEPARTMENTS: administration	242127		242127							
TOTAL OVERHEAD	242127		242127							
DIRECT SERVICE DEPARTMENTS: nursing & med svc.	402525		402525	.465	112589		112589	515114		515114
resident services	13266	2506	15772	.018	4358		4358	17624	2506	20130
laundry	29986		29986	.035	8474		8474	38460		38460
housekeeping	133718		133718	.154	37288		37288	171006		171006
dietary	242818		242818	.280	67796		67796	310614		310614
rehabilitation	5599		5599	.007	1695		1695	7294		7294
lab & xray	5012		5012	.006	1453		1453	6465		6465
pharmacy	30612		30612	.035	8474		8474	39086		39086
TOTAL DIRECT SERVICE	863536		866042	1.00	242127		242127	1108169		1108169
TOTAL SITE COSTS	1105663		1108169							

Setting Shady Grove

FORM R

HOURS PER CARE-GIVER TYPE

1. Hours worked per day (Form D, excluding breaks and lunch)) 7.167

   8 - 30 min lunch
   - 2x10 min breaks
   7 hr 10 min = 7.17

2. Hours worked per week (Form D, excluding breaks and lunch) 7.167x5 = 35.84

3. Hours worked per year (Line 2 x 52 weeks per year) 1864

4. Vacation hours per year (vacation ~~weeks~~ days from Form D x Line 1 above) (86)

5. Sick hours per year (sick days from Form D x Line 1 above)) (43)

6. Holiday hours per year (holidays from Form D x Line 1 above) (57)

7. Net hours worked per year 1678

8. To determine paid working hours by provider category, multiply the number of FTEs by net hours worked per year (Line 7):

	Column 1	Column 2	Column 3	Column 4
	Provider Category	Number of FTEs (See Form B)	Net Hours Worked Per Year (Line 7)	Total Hours Worked (Col. 2 x Col. 3)
1	RN	13501/2088 = 6.47	1678	10,850
2	LGPN (staff)	4791/2088 = 2.29	1678	3,850
3	LGPN (agency)	3761/2088 = 1.80	1864*	3,357
4	Aides + Ords.	58167/2088 = 27.86	1678	46,745
5	Ophthalmologist			42**
6	Physician + ENT			778**
7	Dentist			28**
8	Podiatrist			51**
9	Director, Soc. Svc.	1.0	1678	1678
10	Volunteers			1040**
11	Physical Therapist			78**
12	Occupational Therapist	.25	1678	420
13	Laundry	4.6	2088**	9605**
14	housekeeping	24.0	2088**	50165**
15	dietary	20.0	1678	33560
16				
17				
18				
19				
20				

* agency help do not receive paid vacation, sick, or holiday

** the hours reported on form B were net of non-patient care time

Setting Shady Grove

FORM S

PERCENTAGE DISTRIBUTION OF PATIENT CARE WAGES

Department Name: nursing & medical service

	A	B	C	D	E	F	G	H	I	J
	PROVIDER TYPE	TOTAL WAGES					PATIENT CARE WAGES			
		ACTUAL	IMPUTED	HOURS WORKED	% OF TIME DEVOTED TO PATIENT CARE	PATIENT CARE SERVICES HOURS	ACTUAL	IMPUTED	TOTAL	DISTRIBUTION OF PATIENT CARE WAGES
1	RN	73176	—	10850	.90	9765	65858		65858	.198
2	LGPN	51430	—	7207	1.00	7207	51430		51430	.155
3	Aides & Orderlies	187881	—	46745	1.00	46745	187881		187881	.565
4	Op	1919	—	42	1.00	42	1919		1919	.006
5	Physician & ENT	21730	—	778	1.00	778	21730		21730	.065
6	Dentist	1439	—	28	1.00	28	1439		1439	.004
7	Podiatrist ~~TOTAL~~	2229	—	51	1.00	51	2229		2229	.007 ~~1.00~~
	TOTAL	339804		65701		64616	332486		332486	1.000

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Setting Shady Grove

FORM S

PERCENTAGE DISTRIBUTION OF PATIENT CARE WAGES

Department Name: housekeeping

	A	B	C	D	E	F	G	H	I	J
	PROVIDER TYPE	TOTAL WAGES					PATIENT CARE WAGES			
		ACTUAL	IMPUTED	HOURS WORKED	% OF TIME DEVOTED TO PATIENT CARE	PATIENT CARE SERVICES HOURS	ACTUAL	IMPUTED	TOTAL	DISTRIBUTION OF PATIENT CARE WAGES
1	Staff	130428	—	50165	1.00	50165	130428	—	130428	1.00
2										
3										
4										
5										
6										
7	TOTAL	130428	—	50165	1.00	50165	130428	—	130428	1.00

Setting Shady Grove

FORM S

PERCENTAGE DISTRIBUTION OF PATIENT CARE WAGES

Department Name: Laundry

	A	B	C	D	E	F	G	H	I	J
	PROVIDER TYPE	TOTAL WAGES					PATIENT CARE WAGES			
		ACTUAL	IMPUTED	HOURS WORKED	% OF TIME DEVOTED TO PATIENT CARE	PATIENT CARE SERVICES HOURS	ACTUAL	IMPUTED	TOTAL	DISTRIBUTION OF PATIENT CARE WAGES
1	staff	28729	—	9605	1.00	9605	28729	—	28729	1.00
2										
3										
4										
5										
6										
7	TOTAL	28729		9605	1.00	9605	28729	—	28729	1.00

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Setting Shady Grove

FORM S

PERCENTAGE DISTRIBUTION OF PATIENT CARE WAGES

Department Name: dietary

	A	B	C	D	E	F	G	H	I	J
	PROVIDER TYPE	TOTAL WAGES					PATIENT CARE WAGES			
		ACTUAL	IMPUTED	HOURS WORKED	% OF TIME DEVOTED TO PATIENT CARE	PATIENT CARE SERVICES HOURS	ACTUAL	IMPUTED	TOTAL	DISTRIBUTION OF PATIENT CARE WAGES
1	Staff	167048	—	33560	1.00	33560	167048	—	167048	1.00
2										
3										
4										
5										
6										
7	TOTAL	167048	—	33560	1.00	33560	167048	—	167048	1.00

Setting Shady Grove

FORM S

PERCENTAGE DISTRIBUTION OF PATIENT CARE WAGES

Department Name: rehabilitation

	A	B	C	D	E	F	G	H	I	J
	PROVIDER TYPE	TOTAL WAGES					PATIENT CARE WAGES			
		ACTUAL	IMPUTED	HOURS WORKED	% OF TIME DEVOTED TO PATIENT CARE	PATIENT CARE SERVICES HOURS	ACTUAL	IMPUTED	TOTAL	DISTRIBUTION OF PATIENT CARE WAGES
1	physical therapist	1756	—	78	1.00	78	1756	—	1756	.35
2	occupational therapist	3474	—	420	.938	394	3259	—	3259	.65
3										
4										
5										
6										
7	TOTAL	5230		498		472	5015	—	5015	1.00

Setting Shady Grove

FORM S

PERCENTAGE DISTRIBUTION OF PATIENT CARE WAGES

Department Name: resident services

	A	B	C	D	E	F	G	H	I	J
	PROVIDER TYPE	TOTAL WAGES					PATIENT CARE WAGES			
		ACTUAL	IMPUTED	HOURS WORKED	% OF TIME DEVOTED TO PATIENT CARE	PATIENT CARE SERVICES HOURS	ACTUAL	IMPUTED	TOTAL	DISTRIBUTION OF PATIENT CARE WAGES
1	director res. svc.	11924		1678	.60	1007	7154		7154	.75
2	volunteers		2506	1040	.95	988		2381	2381	.25
3										
4										
5										
6										
7	TOTAL	11924	2506	2718		1995	7154	2381	9535	1.00

Setting Shady Grove

FORM T-1

ACTUAL HOURLY RATES FOR CARE-GIVERS

DEPARTMENT nursing & medical service

a) LOADED DEPT. COST 515114 Form Q, Col. I

b) Subtract PATIENT CARE COSTS (332486) Form S, Col. G, Line 7 =

c) NON PATIENT CARE COSTS 182628

Col. 1 Care-Giver Type	Col. 2 Distribution Factor Col. J, Form S, line n	Col. 3 Col. 2 x c	Col. 4 Salary Cost for this Care-Giver – Form S, Col. G, line n	Col. 5 Total Actual Care-Giver Costs Col. 3 + Col. 4	Col. 6 Patient Care Service Hours Form S, Col. F line n	Col. 7 Hourly Rate for this Care-Giver Actual Col. 5 ÷ Col. 6
RN	.198	36160	65858	102018	9765	10.45
LGPN	.155	28307	51430	79737	7207	11.06
Aides/Ords	.565	103185	187881	291066	46745	6.23
Ophthalmolog.	.006	1096	1919	3015	42	71.79
Phys. & ENT	.065	11871	21730	33601	778	43.19
Dentist	.004	731	1439	2170	28	77.50
Podiatrist	.007	1278	2229	3507	51	68.76
		182628	332486	515114	64616	7.97

Setting Shady Grove

FORM T-1

ACTUAL HOURLY RATES FOR CARE-GIVERS

DEPARTMENT housekeeping

a) LOADED DEPT. COST 171006 Form Q, Col. 1

b) Subtract PATIENT CARE COSTS (130428) Form S, Col. G, Line 7 =

c) NON PATIENT CARE COSTS 40578

Col. 1 Care-Giver Type	Col. 2 Distribution Factor Col. J, Form S, line n	Col. 3 Col. 2 x c	Col. 4 Salary Cost for this Care-Giver – Form S, Col. G, line n	Col. 5 Total Actual Care-Giver Costs Col. 3 + Col. 4	Col. 6 Patient Care Service Hours Form S, Col. F line n	Col. 7 Hourly Rate for this Care-Giver Actual Col. 5 ÷ Col. 6
staff	1.00	40578	130428	171006	50165	3.41

Setting Shady Grove

FORM T-1

ACTUAL HOURLY RATES FOR CARE-GIVERS

DEPARTMENT laundry

a) LOADED DEPT. COST 38460 Form Q, Col. I

b) Subtract PATIENT CARE COSTS (28729) Form S, Col. G, Line 7 =

c) NON PATIENT CARE COSTS 9731

Col. 1 Care-Giver Type	Col. 2 Distribution Factor Col. J, Form S, line n	Col. 3 Col. 2 x c	Col. 4 Salary Cost for this Care-Giver – Form S, Col. G, line n	Col. 5 Total Actual Care-Giver Costs Col. 3 + Col. 4	Col. 6 Patient Care Service Hours Form S, Col. F line n	Col. 7 Hourly Rate for this Care-Giver Actual Col. 5 ÷ Col. 6
staff	1.00	9731	28729	38460	9605	4.00

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Setting Shady Grove

FORM T-1

ACTUAL HOURLY RATES FOR CARE-GIVERS

DEPARTMENT dietary

a) LOADED DEPT. COST 310614 Form Q, Col. I

b) Subtract PATIENT CARE COSTS (167048) Form S, Col. G, Line 7 =

c) NON PATIENT CARE COSTS 143566

Col. 1 Care-Giver Type	Col. 2 Distribution Factor Col. J, Form S, line n	Col. 3 Col. 2 x c	Col. 4 Salary Cost for this Care-Giver – Form S, Col. G, line n	Col. 5 Total Actual Care-Giver Costs Col. 3 + Col. 4	Col. 6 Patient Care Service Hours Form S, Col. F line n	Col. 7 Hourly Rate for this Care-Giver Actual Col. 5 ÷ Col. 6
staff	1.00	143566	167048	310614	33560	9.26

Setting Shady Grove

FORM T-1

ACTUAL HOURLY RATES FOR CARE-GIVERS

DEPARTMENT rehabilitation

a) LOADED DEPT. COST 7294 Form Q, Col. I

b) Subtract PATIENT CARE COSTS (5015) Form S, Col. G, Line 7 =

c) NON PATIENT CARE COSTS 2279

Col. 1 Care-Giver Type	Col. 2 Distribution Factor Col. J, Form S, line n	Col. 3 Col. 2 x c	Col. 4 Salary Cost for this Care-Giver – Form S, Col. G, line n	Col. 5 Total Actual Care-Giver Costs Col. 3 + Col. 4	Col. 6 Patient Care Service Hours Form S, Col. F line n	Col. 7 Hourly Rate for this Care-Giver Actual Col. 5 ÷ Col. 6
phys. ther.	.35	798	1756	2554	78	32.74
occ. ther.	.65	1481	3259	4740	394	12.03
		2279	5015	7294	472	15.45

Setting Shady Grove

FORM T-1

ACTUAL HOURLY RATES FOR CARE-GIVERS

DEPARTMENT resident services

a) LOADED DEPT. COST 17624 Form Q, Col. I

b) Subtract PATIENT CARE COSTS (7154) Form S, Col. G, Line 7 =

c) NON PATIENT CARE COSTS 10470

Col. 1 Care-Giver Type	Col. 2 Distribution Factor Col. J, Form S, line n	Col. 3 Col. 2 x c	Col. 4 Salary Cost for this Care-Giver – Form S, Col. G, line n	Col. 5 Total Actual Care-Giver Costs Col. 3 + Col. 4	Col. 6 Patient Care Service Hours Form S, Col. F line n	Col. 7 Hourly Rate for this Care-Giver Actual Col. 5 ÷ Col. 6
director	.75	7853	7154	15007	1007	14.90
volunteer	.25	2617	—	2617	988	2.65
		10470	7154	17624	1995	8.83

Setting Shady Grove

FORM T-2

IMPUTED HOURLY RATES FOR CARE-GIVERS

DEPARTMENT resident services

a) LOADED DEPT. COST 2506 Form Q, Col. J

b) Subtract PATIENT CARE COSTS (2381) Form S, Col. H, Line 7 =

c) NON PATIENT CARE COSTS 125

Col. 1 Care-Giver Type	Col. 2 Distribution Factor Col. J, Form S, line n	Col. 3 Col. 2 x c	Col. 4 Salary Cost for this Care-Giver – Form S Col. H, line n	Col. 5 Total Imputed Care-Giver Costs Col. 3 + Col. 4	Col. 6 Patient Care Service Hours Form S, Col. F line n	Col. 7 Hourly Rate for this Care-Giver Imputed Col. 5 ÷ Col. 6
director	.75	94	—	94	1007	.09
volunteers	.25	31	2381	2412	988	2.44

Setting Shady Grove

DISTRIBUTION OF PROVIDER HOURS BY SERVICES

FORM U

SERVICES	CAREGIVER TYPE: RN		CAREGIVER TYPE: LGPN		CAREGIVER TYPE: Aides + orderlies		CAREGIVER TYPE: Ophthalmologist	
	Percent of Time Spent	Service Hours Provided	Percent of Time Spent	Service Hours Provided	Percent of Time Spent	Service Hours Provided	Percent of Time Spent	Service Hours Provided
Medical Care							1.00	42
Mental Health								
Emotional Support								
Nursing – General	.22	2148	1.00	7207				
Nursing – Specialized	.78	7617						
Physical Therapy								
Occupational Therapy								
Speech & Hearing Therapy								
Recreational Activities								
Personal Care					1.00	46745		
Homemaking/Housekeeping								
Special Education								
Vocational Education								
Case Management								
Dietary Services								
Podiatry								
Dental Care								
Optometry								
Inhalation Therapy								
Patient Transportation								
Non-Specific Patient Supervision								
Other								
	100%	9765 TOTAL HOURS	100%	7207 TOTAL HOURS	100%	46745 TOTAL HOURS	100%	42 TOTAL HOURS

Sett[redacted]

DISTRIBUTION OF PROVIDER HOURS BY SERVICES

FORM U

SERVICES	CAREGIVER TYPE: Physician + ENT		CAREGIVER TYPE: Dentist		CAREGIVER TYPE: Podiatrist		CAREGIVER TYPE:	
	Percent of Time Spent	Service Hours Provided	Percent of Time Spent	Service Hours Provided	Percent of Time Spent	Service Hours Provided	Percent of Time Spent	Service Hours Provided
Medical Care	1.00	778						
Mental Health								
Emotional Support								
Nursing – General								
Nursing – Specialized								
Physical Therapy								
Occupational Therapy								
Speech & Hearing Therapy								
Recreational Activities								
Personal Care								
Homemaking/Housekeeping								
Special Education								
Vocational Education								
Case Management								
Dietary Services								
Podiatry					1.00	51		
Dental Care			1.00	28				
Optometry								
Inhalation Therapy								
Patient Transportation								
Non-Specific Patient Supervision								
Other								
	100%	778 TOTAL HOURS	100%	28 TOTAL HOURS	100%	51 TOTAL HOURS	100%	TOTAL HOURS

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Setting Shady Grove

DISTRIBUTION OF PROVIDER HOURS BY SERVICES

FORM U

SERVICES	CAREGIVER TYPE: Director, Ass. Suz.		CAREGIVER TYPE: Volunteers		CAREGIVER TYPE: Physical Therapist		CAREGIVER TYPE: occ. Therapist	
	Percent of Time Spent	Service Hours Provided	Percent of Time Spent	Service Hours Provided	Percent of Time Spent	Service Hours Provided	Percent of Time Spent	Service Hours Provided
Medical Care								
Mental Health								
Emotional Support	.17	171	.16	158				
Nursing – General								
Nursing – Specialized							.133	52
Physical Therapy					1.00	78		
Occupational Therapy							.533	210
Speech & Hearing Therapy								
Recreational Activities	.33	332	.57	563			.133	52
Personal Care			.11	109			.201	80
Homemaking/Housekeeping								
Special Education								
Vocational Education								
Case Management	.50	504						
Dietary Services								
Podiatry								
Dental Care								
Optometry								
Inhalation Therapy								
Patient Transportation								
Non-Specific Patient Supervision			.16	158				
Other								
	100%	1007 TOTAL HOURS	100%	988 TOTAL HOURS	100%	78 TOTAL HOURS	100%	394 TOTAL HOURS

DISTRIBUTION OF PROVIDER HOURS BY SERVICES

FORM U

SERVICES	CAREGIVER TYPE: dietary staff		CAREGIVER TYPE: housekeeping staff		CAREGIVER TYPE: laundry staff		CAREGIVER TYPE:	
	Percent of Time Spent	Service Hours Provided	Percent of Time Spent	Service Hours Provided	Percent of Time Spent	Service Hours Provided	Percent of Time Spent	Service Hours Provided
Medical Care								
Mental Health								
Emotional Support								
Nursing – General								
Nursing – Specialized								
Physical Therapy								
Occupational Therapy								
Speech & Hearing Therapy								
Recreational Activities								
Personal Care								
Homemaking/Housekeeping	1.00	33560	1.00	50165	1.00	9605		
Special Education								
Vocational Education								
Case Management								
Dietary Services								
Podiatry								
Dental Care								
Optometry								
Inhalation Therapy								
Patient Transportation								
Non-Specific Patient Supervision								
Other								
	100%	33560 TOTAL HOURS	100%	50165 TOTAL HOURS	100%	9605 TOTAL HOURS	100%	TOTAL HOURS

Setting Shady Grove

FORM V

SERVICE COST WORKSHEET

Service Type: medical care

	A	B	C	D	E	F	G	H
	TYPE OF CARE-GIVER	CAREGIVER COST/HOUR			SERVICE HOURS PROVIDED	COSTS		
		ACTUAL	IMPUTED	TOTAL		ACTUAL	IMPUTED	TOTAL
1	Ophthalmologist	71.79	—	71.79	42	3015.18	—	3015.18
2	physician + ENT	43.19	—	43.19	778	33601.82	—	33601.82
3								
4								
5								
6								
7								
8								
9	TOTAL				820	36617.00	—	33617.00
10	Costs divided by total service hours					44.65		44.65

FORM V

Setting Shady Grove

SERVICE COST WORKSHEET

Service Type: emotional support

	A	B	C	D	E	F	G	H
	TYPE OF CARE-GIVER	CAREGIVER COST/HOUR			SERVICE HOURS PROVIDED	COSTS		
		ACTUAL	IMPUTED	TOTAL		ACTUAL	IMPUTED	TOTAL
1	director res. svc.	14.90	.09	14.99	171	2547.90	15.39	2563.29
2	volunteers	2.65	2.44	5.09	158	418.70	385.52	804.22
3								
4								
5								
6								
7								
8								
9	TOTAL				329	2966.60	400.91	3367.51
10	Costs divided by total service hours					9.02	1.22	10.24

D57

FORM V

Setting Shady Grove

SERVICE COST WORKSHEET

Service Type: nursing - general

	A	B	C	D	E	F	G	H
	TYPE OF CARE-GIVER	CAREGIVER COST/HOUR			SERVICE HOURS PROVIDED	COSTS		
		ACTUAL	IMPUTED	TOTAL		ACTUAL	IMPUTED	TOTAL
1	RN	10.45	—	10.45	2148	22446.60	—	22446.60
2	LGPN	11.06	—	11.06	7207	79709.42	—	79709.42
3								
4								
5								
6								
7								
8								
9	TOTAL				9355	102156.02	—	102156.02
10	Costs divided by total service hours					10.92	—	10.92

102156 ÷ 12 mos = 8513 ÷ 140 pts. = 60.81 /pt/mo

9355 ÷ 12 mos = 779.6 ÷ 140 pts = 5.57 hrs/pt/mo

FORM V

Setting Shady Grove

SERVICE COST WORKSHEET

Service Type: nursing - specialized

	A	B	C	D	E	F	G	H
	TYPE OF CARE-GIVER	CAREGIVER COST/HOUR			SERVICE HOURS PROVIDED	COSTS		
		ACTUAL	IMPUTED	TOTAL		ACTUAL	IMPUTED	TOTAL
1	RN	10.45	-	10.45	7617	79597.65	-	79597.65
2	Occ. Ther.	12.03	-	12.03	52	625.56	-	625.56
3								
4								
5								
6								
7								
8								
9	TOTAL				7669	80223.21	-	80223.21
10	Costs divided by total service hours					10.46	-	10.46

Setting Shady Grove

FORM V

SERVICE COST WORKSHEET

Service Type: Physical Therapy

	A	B	C	D	E	F	G	H
	TYPE OF CARE-GIVER	CAREGIVER COST/HOUR			SERVICE HOURS PROVIDED	COSTS		
		ACTUAL	IMPUTED	TOTAL		ACTUAL	IMPUTED	TOTAL
1	physical therapist	32.74	—	32.74	78	2553.72	—	2553.72
2								
3								
4								
5								
6								
7								
8								
9	TOTAL				78	2553.72	—	2553.72
10	Costs divided by total service hours					32.74		32.74

D60

FORM V

Setting Shady Grove

SERVICE COST WORKSHEET

Service Type: occupational Therapy

	A	B	C	D	E	F	G	H
	TYPE OF CARE-GIVER	CAREGIVER COST/HOUR			SERVICE HOURS PROVIDED	COSTS		
		ACTUAL	IMPUTED	TOTAL		ACTUAL	IMPUTED	TOTAL
1	occupational therapist	12.03		12.03	210	2526.30	—	2526.30
2								
3								
4								
5								
6								
7								
8								
9	TOTAL				210	2526.30	—	2526.30
10	Costs divided by total service hours					12.03	—	12.03

D61

FORM V

Setting Shady Grove

SERVICE COST WORKSHEET

Service Type: recreational activities

	A	B	C	D	E	F	G	H
	TYPE OF CARE-GIVER	CAREGIVER COST/HOUR			SERVICE HOURS PROVIDED	COSTS		
		ACTUAL	IMPUTED	TOTAL		ACTUAL	IMPUTED	TOTAL
1	director rec. soc.	14.90	.09	14.99	332	4946.80	29.88	4976.68
2	volunteers	2.65	2.44	5.09	563	1491.95	1373.72	2865.67
3	occ. ther.	12.03	—	12.03	52	625.56	—	625.56
4								
5								
6								
7								
8								
9	TOTAL				947	7064.31	1403.60	8467.91
10	Costs divided by total service hours					7.46	1.48	8.94

FORM V

Setting Shady Grove

SERVICE COST WORKSHEET

Service Type: personal care

	A	B	C	D	E	F	G	H
	TYPE OF CARE-GIVER	CAREGIVER COST/HOUR			SERVICE HOURS PROVIDED	COSTS		
		ACTUAL	IMPUTED	TOTAL		ACTUAL	IMPUTED	TOTAL
1	aides & orderlies	6.23	—	6.23	46745	291221.35	—	291221.35
2	volunteers	2.65	2.44	5.09	109	288.85	265.96	554.81
3	occ. ther.	12.03	—	12.03	80	962.40	—	962.40
4								
5								
6								
7								
8								
9	TOTAL				46934	292472.60	265,96	292738.56
10	Costs divided by total service hours					6.23	.01	6.24

D63

FORM V

Setting Shady Grove

SERVICE COST WORKSHEET

Service Type: homemaking / housekeeping

	A	B	C	D	E	F	G	H
	TYPE OF CARE-GIVER	CAREGIVER COST/HOUR			SERVICE HOURS PROVIDED	COSTS		
		ACTUAL	IMPUTED	TOTAL		ACTUAL	IMPUTED	TOTAL
1	housekeeping staff	3.41	—	3.41	50165	171062	—	171062
2	laundry staff	4.00	—	4.00	9605	38420	—	38420
3	dietary staff	9.26	—	9.26	33560	310766	—	310766
4								
5								
6								
7								
8								
9	TOTAL				93330	520248	—	520248
10	Costs divided by total service hours					5.57	—	5.57

520248 ÷ 12 mos = 43354 ÷ 140 pts. = 309.67 /pt/mo.
93330 ÷ 12 mos = 7777.5 ÷ 140 pts = 55.55 hrs/pt/mo

FORM V

Setting Shady Grove

SERVICE COST WORKSHEET

Service Type: Case Management

	A	B	C	D	E	F	G	H
	TYPE OF CARE-GIVER	CAREGIVER COST/HOUR			SERVICE HOURS PROVIDED	COSTS		
		ACTUAL	IMPUTED	TOTAL		ACTUAL	IMPUTED	TOTAL
1	director res. svc.	14.90	.09	14.99	504	7509.60	45.36	7554.96
2								
3								
4								
5								
6								
7								
8								
9	TOTAL				504	7509.60	45.36	7554.96
10	Costs divided by total service hours					14.90	.09	14.99

7554.96 ÷ 12 mos = 629.58 ÷ 140 pts = 4.50 /pt/mo

504 ÷ 12 mos = 42 hrs ÷ 140 pts = .3 hrs / pt / mo

Setting Shady Grove

FORM V

SERVICE COST WORKSHEET

Service Type: podiatry

	A	B	C	D	E	F	G	H
	TYPE OF CARE-GIVER	CAREGIVER COST/HOUR			SERVICE HOURS PROVIDED	COSTS		
		ACTUAL	IMPUTED	TOTAL		ACTUAL	IMPUTED	TOTAL
1	podiatrist	68.76	-	68.76	51	3506.76	-	3506.76
2								
3								
4								
5								
6								
7								
8								
9	TOTAL				51	3506.76	—	3506.76
10	Costs divided by total service hours					68.76	—	68.76

FORM V

Setting Shady Grove

SERVICE COST WORKSHEET

Service Type: dental care

	A	B	C	D	E	F	G	H
	TYPE OF CARE-GIVER	CAREGIVER COST/HOUR			SERVICE HOURS PROVIDED	COSTS		
		ACTUAL	IMPUTED	TOTAL		ACTUAL	IMPUTED	TOTAL
1	dentist	77.50	—	77.50	28	2170.00	—	2170.00
2								
3								
4								
5								
6								
7								
8								
9	TOTAL				28	2170.00	—	2170.00
10	Costs divided by total service hours					77.50	—	77.50

D67

Setting Shady Grove

FORM V

SERVICE COST WORKSHEET

Service Type: non-specific patient supervision

	A	B	C	D	E	F	G	H
	TYPE OF CARE-GIVER	CAREGIVER COST/HOUR			SERVICE HOURS PROVIDED	COSTS		
		ACTUAL	IMPUTED	TOTAL		ACTUAL	IMPUTED	TOTAL
1	Volunteers	2.65	2.44	5.09	158	418.70	385.52	804.22
2								
3								
4								
5								
6								
7								
8								
9	TOTAL				158	418.70	385.52	804.22
10	Costs divided by total service hours					2.65	2.44	5.09

804.22 ÷ 12 mo = 67.02 ÷ 140 pts = .48/pt/mo

158 ÷ 12 mo = 13.17 ÷ 140 = .09 hrs/pt/mo

Note to User

At this point, it is advisable to check your calculations. One procedure is to check that the total costs on Form V (the sum of Column H, Line 9 across all copies of Form V) is equal to the total costs presented on Form Q, Column K, after subtracting the loaded costs of lab, x-ray, pharmacy, and any other departments which were excluded from the methodology. An alternative procedure is to check that the total hours on Form V (the sum of Column E, Line 9 across all copies of Form V) is equal to the total hours presented on Form U (i.e. the sum of the total hours for all providers on all copies of Form U). If there is a discrepancy in either case (aside from rounding errors), compare the provider entries on Form U with those on Form V to be sure that all hours were transferred.

SUMMARY OF SERVICE COSTS

Setting Shady Grove

A	B	C	D	E
SERVICE	UNIT OF SERVICE	COST/UNIT OF SERVICE		
		TOTAL	ACTUAL	IMPUTED
Medical Care	Cost/Hour	44.65	44.65	—
Mental Health	Cost/Hour			
Emotional Support	Cost/Hour	10.24	9.02	1.22
Nursing – General	Cost/Hour	10.92	10.92	
Nursing – Specialized	Cost/Hour	10.46	10.46	—
Physical Therapy	Cost/Hour	32.74	32.74	—
Occupational Therapy	Cost/Hour	12.03	12.03	
Speech & Hearing Therapy	Cost/Hour			
Recreational Activities	Cost/Hour	8.94	7.46	1.48
Personal Care	Cost/Hour	6.24	6.23	.01
Homemaking/Housekeeping	Cost/Hour	5,57	5,57	—
Special Education	Cost/Hour			
Vocational Education	Cost/Hour			
Case Management	Cost/Hour	14.99	14.90	.09
Dietary Services	Cost/Hour			
Podiatry	Cost/Hour	68.76	68.76	—
Dental Care	Cost/Hour	77.50	77.50	—
Optometry	Cost/Hour			
Inhalation Therapy	Cost/Hour			
Patient Transportation	Cost/Hour			
Non-Specific Patient Supervision	Cost/Hour	5.09	2.65	2.44
Food	Co/Mo/Pers*	70.61	70.61	—
Shelter	Co/Mo/Pers	233.83	233.83	—

* Cost/Month/Person

Setting: Shady Grove

SERVICE COSTS BY PATIENT PROFILE TYPE PER MONTH
(INTERNAL AND TOTAL)

FORM X

SERVICES \ PROFILES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Medical Care	9.38	4.47	17.86	4.47	5.80	11.16	24.83	89.30																
Mental Health																								
Emotional Support	31	1.02	61	1.02	.51	0	.41	1.02																
Nursing General	60.81	60.81	60.81	60.81	60.81	60.81	60.81	60.81																
Nursing Specialized	4.60	2.62	4.24	7.85	16.74	5.23	31.45	41.84																
Physical Therapy																								
Occupational Therapy																								
Speech & Hearing Therapy																								
Recreational Activities	50.06	62.58	46.94	26.82	53.64	53.64	60.17	0																
Personal Care Services	0	0	9.98	10.61	12.98	8.11	18.72	17.42																
Homemaking/Housekeeping	309.67	309.67	309.67	309.67	309.67	309.67	309.67	309.67																
Special Education																								
Vocational Education																								
Case Management	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.60																
Dietary Services																								
Podiatry	5.50	0	8.25	0	17.19	17.19	0	17.19																
Dental Care	1.24	0	0	2.33	3.10	0	4.65	7.75																
Optometry																								
Inhalation Therapy																								
Patient Transportation																								
Non Specific Patient Supervision	.48	.48	.48	.48	.48	.48	.48	.48																
Food	70.61	70.61	70.61	70.61	70.61	70.61	70.61	70.61																
Building Costs	233.83	233.83	233.83	233.83	233.83	233.83	233.83	233.83																
Total Internal Costs	750.99	750.59	805.18	733.00	781.46	775.23	836.13	1011.72																
Total External Costs	13.83	3.33	—	2.88				7.50																
GRAND TOTAL	764.82	753.92	805.18	735.88	781.46	775.23	836.13	1019.22																

FORM Y

HOURLY RATES FOR EXTERNAL COSTS (ESTIMATES)

	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6
	Caregivers	Estimate Base Salary	Medical Care Index Adjustment	Col 3 x Col 2	Col 4 x 1.50	Hourly Rate Col 5 ÷ 1880 Hours/year
PHYSICIANS	GP	42,336	1.263	53470	80205	42.66
OTHER HEALTH PROFESSIONALS	dentist	34,300	1.263	43321	64981	34.56
	phys. therapist	$20/hr.	—	$20/hr	—	$20/hr
	psychologist	40,027	1.263	50554	75831	40.34
NON PROFESSIONALS	eye clinic	$30/visit		$30/visit	—	$30/visit

Setting Shady Grove

SERVICE COSTS BY PATIENT PROFILE TYPE PER MONTH
(EXTERNAL)

FORM Z

SERVICES \ PROFILES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Medical Care	7.11																							
Mental Health	6.72																							
Emotional Support																								
Nursing General																								
Nursing-Specialized																								
Physical Therapy		3.33																						
Occupational Therapy																								
Speech & Hearing Therapy																								
Recreational Activities																								
Personal Care Services																								
Homemaking/Housekeeping																								
Special Education																								
Vocational Education																								
Case Management																								
Dietary Services																								
Podiatry																								
Dental Care				2.88																				
Optometry								7.50																
Inhalation Therapy																								
Patient Transportation																								
Non Specific Patient Supervision																								
Food																								
Building Costs																								
Total External Costs	13.83	3.33		2.88				7.50																

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